

THE CANADIAN SPORTSMAN AND NATURALIST.

No. I.

MONTREAL, JANUARY, 1882.

VOL. II.

WILLIAM COUPER, Editor.

OUR NEW TITLE-PAGE.

Our readers will, no doubt, be pleased with the improvement which we have made in our Title-page. The design is by Mr. A. F. Dunlop, Architect, and the engraving by Mr. J. L. Wiseman, both of this city. The work reflects credit on the skill of the artists.

KILLING FISH BY DYNAMITE.

The residents of Indiana have been making use of the above explosive to kill fish. The shock destroys hundreds of marketable fishes, but at the same time there are thousands of young fish killed and allowed to decay in the water. The destructiveness of this method is so great that popular indignation should arise against it. We have been informed that the unmarketable fishes thus destroyed by dynamite in the White-water River, Ill., were seen floating in the river and its tributaries fully forty miles from the scene of the explosion. We have some knowledge of a similar experiment to kill fish in Canadian waters. The party who tried it, made the first attempt at Quebec. Americans to-day would call such a man "crank," and although we have frequently remarked "daft" moments in his dealings, he was determined and had energy as a fishmonger. The material had to be obtained to supply his customers, and as he could not procure sufficient by net process he thought of trying the dynamite one. On a beautiful summer's morning, he arose from his bed in Blanchard's Hotel, and taking a handsome trout rod in hand, proceeded to the Custom-house wharf, alongside of which lay a small trading schooner. The dynamite fish-killer tripped lightly on board the vessel, and having quietly adjusted the explosive to a line attached to the fishing rod, the experiment began; but the Skipper, who was in his berth,—hearing light

footsteps on board his craft—came forth from his cabin just at the instant of the explosion to find the schooner and himself thrown partially on the wharf. Of course the Skipper asked him "what you do there," but he coolly answered that "he was fishing," that a large fish took hold of his bait, and the line and a great portion of his twelve dollar rod were gone. The turmoil being over and the experimenter having quickly disappeared from the scene, the matter ended, but it must be remembered that he had an object in view and that was to discover if he could procure fish in large quantities by a cheap and easy process. This was his first trial with the dangerous article, and we cannot say that he tried dynamite again, but the intentions of this fishmonger were to dynamite the Trout Lakes of our Laurentide mountains, in order to procure large quantities of fish to supply the demand of the American market. He failed, however, as every man will, who uses unnatural or unlawful modes to catch his game. We have had accounts of large quantities of small fishes belonging to several species having been seen dead on the waters of Lake Ontario, and even in the Lower St. Lawrence, but no one has given a proper cause for the mortality. We are told that some years ago, the Norway Haddock (*Sebastes Norvegicus*) appeared in thousands opposite Metis, but they were all dead. Millions of Sticklebacks have been seen on the surface of the salt water in the Lower St. Lawrence, but what killed them is a mystery. Some attribute it to aqueous earthquakes producing sulphureous gases. Water may be poisoned in many ways; we know that lime when cast into the upper portion or source of a trout stream, will, in a short time, kill every fish in it. Fresh cut pine sawdust when thrown into a river, becomes disagreeable to fish, but this dust produces greater harm after it accumulates, for saw-

dust will go together even under water, and we have known instances on the Ottawa when the acid and pyroligneous carbon exploded in winter sending the ice into thousands of pieces.—C.

HATCHING SALMON.

The Government of the Dominion devotes a large amount of money annually for fish hatching, and a few men derive a very comfortable living from the business. But we doubt that since the hatcheries were erected the species of fishes hatched therein have increased to be of additional commercial value. What has become of the thousands of young fishes which were planted in Lake Ontario? Were any of them seen since? What have they produced? These are important questions to ask. The hatching establishment at Newcastle must make some kind of show, and the employees have to exhibit a little energy in order that the Government may see that they are working for their money. This is all very well if anything could be shown for the outlay. We say that nothing of apparent value has as yet been derived from hatching Salmon in Canada. On the contrary, the adult fish are taken from one river and killed to procure *ova* that other rivers may be stocked; yet the hatching of Salmon has been going on for years in the Provinces of Ontario and Quebec, and the fish are becoming scarcer year after year. This is pointedly the case on the south coast of the Gulf of St. Lawrence, where Salmon hatching houses are situated. It is true that there is too much netting and too many weirs set up in the tidal waters which are destructive to all marine fishes, and the Salmon have to suffer from these causes, but we deprecate against the evil mode in which adult Salmon are taken from their native river to procure material for the imaginary purposes of increasing the species. It is cruel, for the fishes are destroyed in the process, besides it is unnatural that Salmon should be planted in a river, the water

of which is disagreeable to them. Of course the Fishery officials will say that we know nothing about hatching Salmon. True, we have not been in the business but possess a knowledge of the operations. There is this argument however, in our favour, that is to say, it is interfering with a course of nature, which if allowed to proceed in the old way would doubtless show that it is wrong. The object of these fish-breeders may be to make new species by transporting and transmuting. They would like to make a new species of Salmon (in fact, that has been tried already; it however turned out to be old *Salmo salar* after all), but it is impossible, the process is not natural. Instead of changing the form or flavour or increasing the true Salmon, they are merely helping to produce deperdition, and we wonder that the system has been so long allowed. It would be far better for the Government and the country to devote a portion or all of the money expended on hatching fish, to make the rivers easy for Salmon to reach their natural spawning-grounds. Artificial fish-leaps should be made in several rivers along the North Shore of the Lower St. Lawrence. If such work was taken in hand, there are several rivers now almost worthless that could be made profitable, and the Fishery Department are cognizant of the fact. The late Rev. Dr. Adamson, published a pamphlet on this subject. We have spoken of it before, but the Department will take neither advice nor instruction from any man—not even a lessee of a river, who, in many cases, knows more about it than they do. To show the cruelty and destruction of the fish culturists, we here take the liberty to quote from the *St. John News* of August 1881, where the editor attacks Professor Hind's theory regarding the migration of Salmon. We have had the pleasure of knowing Mr. Hind when Professor of Chemistry in Trinity College, Toronto, and have read some curious statements in regard to his knowledge of Natural History since he removed to Nova Scotia; but it matters not, we

have some consideration for Professor Hind's investigations regarding the noble fish, and when he wrote of the migration of Salmon, depend on it, he was not far astray. His knowledge of Natural History cannot be pool-poohed by any penny-liner. We also can vouch for the fact that sea-trout and brook-trout enter the upper waters of *all* Salmon rivers, for two purposes, (as they are parasites on their own genera), to destroy the eggs and fry of *Salmo salar*. The Salmon fry allowed to escape from the hatcheries in New Brunswick, have been devoured by trout immediately after being deposited by the officer. "F. L." a correspondent to the *St. John Telegraph*, makes this statement, and we can corroborate it. The system of netting the pools to supply the hatcheries with ova is destruction to the parent fish, as we find that it takes 500 females to supply ova for the first start of a single hatchery, and we are informed that there are four hatcheries at present operated in the Lower Provinces. Then, taking these at 500 each hatchery, it is requisite that 2,000 female fish are annually destroyed in the spring in order to keep these officials going; and besides, it is necessary that a certain number of males should be obtained to fertilize the ova. What a destruction of fish? which if allowed to pass up to their natural spawning-grounds, would in the true course of nature, produce more genuine Salmon than all the hatcheries in the Dominion. What cruelty? What waste? Now we have proof of what we say! We wish this business ended!! Are there no scientific men in Parliament? Cannot some one stand up for the rights of truth; If not, then farewell to our Salmon fisheries: farewell to the Salmon hatcheries; and farewell to the Fishery Department.—C.

SPORT AND SPORTSMEN.

What is "sport" and who are "sportsmen?" appears to be peculiarly defined by European and American writers. There is a vast difference between play and pastime for a consider-

ation, and diversion, or properly speaking the pleasure a man acquires when he turns aside from his every day duties to go off to the woods, prairies or marshes in search of game. A sportsman is a man of activity, fond of hunting and fishing, willing to pay freely for his privileges. He disdains unlawful acts and always has an eye on the pot-hunter. The gambler is not his companion; his associates are always gentlemen. Such a man is a true sportsman—a lover of legitimate sport. What then constitutes "sport?" It consists virtually in the relief of man from business confinement, that recreation may be obtained with rod and gun, in the woods, on the lakes or along the river banks. "sport" is what we call fair play between "man and beast;" and the man who stands by this motto will never feel ashamed of his position. It is said that Fox and Otter hunting constitutes "sport," and we have nothing to say against it, because they show fair play, and the chase does not arise from mercenary motives. Nothing of this nature has so far appeared among the Fox-hunters of Canada, and as regards the Otter its venation is not carried out here as in Scotland. It occurs to us that the word "sport" is not properly rendered. It is said to be "a diversion, pastime, jest, game or jingle," and it is evident that on the strength of this broad definition, editors of American sporting papers allow their columns to be filled with pastimes under the heads of horse and boat-racing, cock-fighting and other gambling jingles, games, jests, pastimes or diversions, none of which have a tendency to elevate mankind. We are not anxious to make the acquaintance of men who will publish and circulate this kind of literature; our aim is to serve a far higher type of mankind. We appreciate athletic sports—it is a grand idea of the young men of Canada to emulate the strong Roman—the youths who will perform on the cross-bar without the "bar," will eventually come out without a scar. The pastime of a young man devoting

a portion of his leisure to the study of Natural History is "sport."—we appreciate his enthusiasm when he enters the woods with insect-net in hand—he has no mercenary objects in view, but a love of study. The student of Geology, Conchology and Botany, and the man who rambles through the fields to procure something to instruct his brother does good and enjoys "sport." Then, in the name of all that is human, why should the word "sport" be associated with such unnatural proceedings as cock-fighting, killing salmon to take their progeny from them; injuring high-bred horses by racing, or gambling in any form, be encouraged in Canada.

The first volume of *THE CANADIAN SPORTSMAN AND NATURALIST*, the only journal in Canada devoted to the lovers of the rod and gun, suffices to illustrate what we intend to follow up, and despite whatever opposition we may receive hereafter from pseudo Canadian Sporting papers, the pages of our periodical will not be contaminated by productions that are not fit to be read by the most fastidious man or woman.—C.

THE INFLUENCE OF SPORT.

To those who are not in the habit of using the gun or fishing-rod it may appear strange that a certain number of their fellow beings have such a fondness for the pleasures of the chase. By some the amusement may be considered childish, by others cruel; yet there is, perhaps, no pastime more calculated to develop a manliness of character than the art of shooting or fishing as practised by a lover of these sports. That, which at one time was the principal occupation of our forefathers, has now become a popular diversion, indulged in by all classes from the peasant to the peer; royalty itself has not been proof against its attractions, and the pleasures of court have been forsaken for the excitement of moor. We need not wonder at the fascination which the forest has for the hunter, or the river or brook for the disciple of "Walton." The pleasures of cast-

ing for trout, or playing the noble salmon, afford opportunities for the display of more manly qualities than a novice is apt to suspect. Patience and judgment, as well as a certain degree of skill, are requisite to success; and who will say that these are not equally essential in other pursuits in life? A love of nature is usually combined with a love for sport; the wanderer in the forest becomes attached to her solitudes, he derives instruction as well as amusement from a contemplation of her works, while the prosecution of his sport affords him at the same time that invigorating exercise so necessary to the enjoyment of health.

WALLACE.

THE PETER REDPATH MUSEUM.

This handsome building which will be hereafter looked on with pride by the inhabitants of Montreal, is situated a short distance from McGill University, to which it is attached for museum educational purposes. The college collection of specimens, in a geological and paleontological view, are extensive, and when arranged in the new building, will be seen to advantage. The Carpenter collection of shells will also form a grand feature of interest both to student and visitor. Dr. Dawson, we are told, will add his own private collection, and a large donation of specimens will be added as soon as the museum is ready for occupation. Montreal will then have a thorough educational museum of Natural History, and the only one in Canada that can compare with some of the Collegiate Museums of the United States. It is expected to be open by the time the American Science Association meets here in August.

What will the Natural History Society of Montreal do when the Peter Redpath Museum opens free to the public? Will they be able to keep up their establishment on the present nominal public charge of admission, a small membership, and a poor government grant? We doubt if they can, and being aware that they were at one time willing to amalgamate

with the Fraser Institute, would it not be a good move on the part of the Council of the Natural History Society to make the same offer to the authorities of McGill University? By so doing, the collections in the Peter Redpath Museum would at once become most extensive, and doubly instructive, in fact the best on this continent. The Geological Museum at Ottawa could not make a comparison with it. We throw out this hint that the matter may be ventilated by those who are interested in it. Unless something of this nature takes place it is seemingly evident that the dissolution of the Society is merely a matter of time. The new museum is only a short distance from the old. The former will be visited by thousands of the inhabitants and visitors to the city, while the old Society must continue to charge for membership and the entrance of strangers. Then we say that the Natural History Society of Montreal should cast away its fossil condition and join an institution with some vitality in it.—C.

Correspondence.

ENTOMOLOGY.

To the Editor of the CANADIAN SPORTSMAN AND NATURALIST:—

SIR,—I have received the November number of your valuable journal, containing a very friendly and favorable notice of Transactions No. 2 of the Ottawa Field Naturalists' Club. In this review exception is taken to names of two weevils which are mentioned in my paper on Coleoptera, injurious to the Pine. The first complaint is that *Polydrosus elegans*, Couper, is given as *Scythropus elegans*, Couper, according to Crotch's revised Check List. As this list gives the *Rhyncophora* according to recent classification, and was issued under the supervision of LeConte and Horn, the blame, if any, of changing this beautiful beetle's generic name, must rest upon their broad shoulders. I may say, however, that in your description of this beetle (published in Canadian Naturalist, 1865), you give it as *Poly-*

drosus? elegans, and at the close of this description add that LeConte does not think it a *Polydrosus*. As regards *Hylobius Stupidus*, Sch., my defence is equally simple. The species is given in the printed lists of the Entomological Society as found in Canada, and my beetles were named by careful comparison with a specimen so labelled, in the collection in possession of the Ottawa Literary and Scientific Society. This fine collection was arranged by Mr. Billings, with, if I mistake not, the assistance of Mr. Pettit and yourself. I have failed to find in THE CANADIAN NATURALIST your description of *H. pinicola*, or I should have compared my beetles with it. You state that it is strange that the species should lie dormant so long when such experienced entomologists as Mr. Billings and yourself collected together for three years around Ottawa. This certainly shows the beetle to be very rare, but does not prove its non-existence. I collected actively for three years without finding it, and have since obtained but three specimens. Mr. Fletcher during a similar term of years has not succeeded in finding one specimen. I hope shortly to have all undetermined and doubtful species named by competent authorities; until I am able to do so this beetle must rest in my collection as *H. Stupidus*.

W. HAGUE HARRINGTON.

Ottawa, 15th Dec. 1881.

NOTE.—I am satisfied with my colleague's statement regarding *Scythropus elegans*, Couper. If Dr. LeConte removed it from the genus *Polydrosus*, the matter is settled. I would, however, be pleased to have a five minutes' glance at *Hylobius Stupidus*, Sch., as at the time I described *H. pinicola* in Transactions Literary and Historical Society, Quebec, —New Series, part 11, p. 85, 1865—I remarked that another of the same-size was found in Western Canada, but with marked difference in elytral characters. I had not the Western insect to compare with my Quebec specimen. *H. pinicola* is allied to *H. arcticus* of the other continent. I have no knowledge of *H. Stupidus*, hence the remarks which led to this correspondence. I was wrong in saying that I described *pinicola* in the Canadian Naturalist and Geologist, published at Montreal.—C.

DANISH SUPERSTITION REGARDING THE CUCKOO.

SIR,—Having admitted into your journal "The Legend of the Crossbill," and a controversy regarding the Robin as "God's Bird," I think the following may interest your readers:—

On the appearance of the Cuckoo (*Cuculus canorus*) in Denmark the village girls, in spring time, kiss their hands—addressing the bird when they hear its note—exclaiming, "Cuckoo, cuckoo, when shall I be married?" Then the old Danish folks, born down with age and rheumatism, repeat the words, "Cuckoo, cuckoo, when shall we be released from this world's care?" The bird continues to call "Cuckoo" so many times as years will elapse, evidently satisfying and dissatisfying many young and old regarding their peculiar wishes. But as some people live to a maximum age and girls may become old maids it is supposed that the poor Cuckoos are so much engaged in annually answering these superstitious people, that they have no time to build nests. Therefore, the eggs of the Cuckoo are deposited in the nest of the Hedge Sparrow (*Accentor modularis*.) R. S.

Montreal, December, 1881.

NOTE.—The female Cuckoo should, in accordance with the general nature of birds, be the nest-builder, and the male is only supposed to call "cuckoo." Our correspondent evidently writes the above to show that one European legend is as good as another. They are either childish or doting thoughts propounded from a want of proper education. We do not wish to have any more of this kind of matter. Give us something original.—C.

THE ACCLIMATIZED SPARROW.

SIR,—As a lover of birds, and being a friend to that pert little bird called the European or English Sparrow (*Passer domesticus*), will you kindly insert in your valuable journal the following extract from the "Gardener's Chronicle," London, Eng., July, 1879, on the

USES OF THE SPARROW :

"We are sorry that Sparrows are still regarded as enemies by many of our village husbandmen; thus the overseers are yet empowered by the vestry meeting to pay one-half-

penny per head for all destroyed. It is a pity we have not yet learned more humanity, for without doubt this persecuted bird is one of the best friends both to the gardener and farmer. A calculation has been made that a pair of Sparrows destroy nearly four thousand caterpillars per week; besides other insects, while rearing their young. When Cockchafer (*Melolontha vulgaris*) abound, which happens periodically, they would speedily become a perfect pest but for the Sparrow. It is true the Rook (*Corvus frugilegus*) destroys an immense quantity, yet it should be remembered the despised Sparrow has access to gardens and other small enclosures where the Rook is denied access. The Sparrow fortunately does more for our house comfort, for he destroys one of our greatest pests, the common house-fly, which, were it not for his persistent efforts, would multiply to an alarming extent. Scarcely anything in the way of insect food comes amiss, for he is a voracious feeder. Therefore he should be regarded more as a friend than a foe."

P.S.—I believe since the above was written, the "Wild Bird's Act" protects the Sparrow.—R.S.

NOTE.—The Domestic Sparrow's habits have considerably changed since its introduction into Canada.—C.

A GENERAL DELUGE.

BY G. W. BROWN, M.D.

(Continued from page 96.)

On many of the islands of the Pacific are found traces of an ancient people who possessed an order of civilization closely resembling that of Oriental nations, as first revealed to us at the commencement of the historic period, and almost identical with those now being explored in Mexico and Yucatan, and similar to those of Peru in South America. These people passed away, as did the mound builders of our own country, leaving enduring monuments of their labors, which modern travellers look upon with astonishment, as they reveal a period of considerable advancement in the arts, and a knowledge of mechanics unknown to their degenerated successors. In support of this proposition, we make the following quotation from a newspaper article which we find floating through the press without credit, but fur-

nishing well authenticated facts of discoveries in the Pacific, a multitude of a similar character being within reach of the common reader:

"In the middle of the Pacific ocean, 3,000 miles distant from the nearest continent, lies Easter Island, abounding with remains of a remote antiquity, which have interested and perplexed a party of savants who recently visited them. This island is 40 miles in circumference, of volcanic origin, barren, no trees, destitute of resources, and inhabited by a few savages who lead the most miserable life imaginable. But upon this narrow strip of land so barren and unproductive, the explorer beholds a forest of gigantic statues, of the origin and beginning of which the race dwelling around know absolutely nothing. The smallest of these statues measured 30 feet, and a few attain the incredible dimensions of 50 feet. Some repose upon Cyclopean platforms; the greater portion of them wear crowns about six feet in height, which have evidently been placed upon these statues after their erection. The foreheads of the statues are retreating, and the mouths prominent, which indications may possibly reveal the race who constructed them. As regards the workmanship displayed upon them, it is rude and clumsy, although not destitute of character and expression. The questions concerning them presented for solution are: What do they represent? Whose handiwork are they? and how came they there? How possibly could this barren island have nourished a race of men capable of raising such monuments? Where is the race? What country do they still inhabit?"

It is well known to the antiquarian that Asia was originally populated by a black race, as is Africa in our day. These aborigines receded before the great Aryan wave which rolled down from the Northeast, driving before it the weaker, as do the same race with the Indians of America at the present time. They overran the great plains of Central Asia and made permanent homes in the valleys of the Tigris and Euphrates; thence spread eastward, intermingling with the already mixed population inhabiting Iran and Hindostan, while an advanced wave, pressed by those in the rear, crossed the Isthmus of Suez, and established themselves along the Nile. These parent waves spread westward and overran Europe, with colonies to Northern Africa, everywhere destroying the males and intermixing, forming varieties of races. In process of ages the same dominant race crossed the Atlantic, to repeat the barbarities of a remote age on the natives of this country, and to efface the link which connects all these with a submerged race over which rolls in majestic and solemn grandeur the deep and surging waves of the mighty Pacific.

It is well-known to geologists that animals whose habitat was in or near the tropical regions, and distant from which they could not survive, have been found embedded in ice in the Arctic regions north of Asia.* They were

so well preserved through the countless ages since their hyperborean imprisonment that their flesh was consumed by carnivorous animals now inhabiting those regions when a warmer sun melted their encasement. This fact of itself demonstrates that the polar regions were once approximating the equatorial; for these animals could never have wandered so far from the places of their nativity. It also proves that the change from a high to a low temperature was sudden, not leaving time between for animal decay to commence after the destruction of life, and the formation of ice, by which they were preserved.

Beds of most excellent mineral coal are found in Greenland, from where it is quarried and loaded directly on ship board of exploring steamers visiting those high latitudes. It is found out-cropping from cliffs at the very margin of the sea. Whether there is more than one stratum of such coal the writer is not informed.

Twenty-eight different beds of coal, superposed one above another, with varying thickness of intervening rock and slate, have been opened and worked in Great Britain. The lowest of these is more than 5,000 feet below the present surface of the sea. This tells us, with unerring certainty, that there has been twenty-eight epochs, each of indefinite duration, when those islands were alternately above and below the sea level; periods when the earth was covered with dense verdure; when the surging ocean rolled over it, and covered that verdure with sand and gravel, the material of which overlying rock was formed; when it again emerged; was again adapted to the growth of vegetation, and again, after the lapse of countless ages, went down, and so has continued until the present order of things was introduced.

What is true of the British islands in this regard, is probably true of every other island and continent on the globe. And this oscillating condition of the earth's crust will ever go on with seas and continents while the same laws which have governed matter as in the past shall continue. To-day a continent, covered with animal and vegetable life; to-morrow the ocean rolls its turbid waves over the melancholy wreck, leaving no trace of the toil,

and sold in great plenty. He declares his belief that the bones still left in northern Russia must greatly exceed in number all the elephants now living on the globe.—*Sir Charles Lyell, in his Principles of Geology, p. 81.*

*So fresh is the ivory throughout northern Russia, that, according to Tilesius thousands of fossil tusks have been collected and used in turning; yet others are still procured

anxiety and unbounded hopes of him who had delved to make it a satisfactory home for his ambition.

The present revealings on the surface of Greenland, where a few hundred years ago were green fields, waving forests, flowing rivers, populous and thrifty villages and a contented people, show only mountains of ice, all nature congealed, a country of desolation and snow. This change has been gradual, and the temperature is still declining.

Iceland, too, is slowly undergoing a similar change. At the same rate of decadence in another hundred years it will cease to be habitable. Already such portions of the population as have means are removing to the northern latitudes of America. The island, like Greenland, will soon be a cold and dreary desolation, to so remain until other changes shall transpire, when it may again, in a lower latitude, become the home of man; but ages of frost and ice must first mark its site; other lands in turn, now nearly tropical, must become frigid; and then it is questionable if any traces of man, even as insignificant as the stone axe or arrow head, shall remain to excite wonder or curiosity among those who shall delve in its soil.

While we can account for the gradual changing of the polarity of the earth and the shifting of climates—the glacial period always existing in some parts of the earth—we cannot, by the same mode of reasoning, explain why whole continents are suddenly submerged, or why the beds of oceans, as suddenly, become continents.

The equatorial diameter of the earth is greater than the polar by some thirty-four miles. While the centre of gravity remains as now the polar and equatorial regions will remain substantially the same; but if from any cause the polar shall preponderate, then a change in polarity will ensue. Such, without doubt, was the case when the tropical elephants were encased in the icebergs of Nova Zembla and Spitzbergen.

Mountains of ice are continually forming within the arctics. The heat of summer cannot reach them; but century after century, and age after age, the accumulation goes on, adding to the polar density. Some disturbing element as an earthquake shock convulsing the globe, a volcanic eruption and upheaval,

or the addition of some fragmentary planet or wandering body lost in space, which has been attracted from its orbit by its nearness to our earth, falls upon it, the equipoise is lost, and the waters of the ocean, seeking their plane, roll over their rocky bounds, engulf continents, and sweep away every vestige of aspiring man save the few favorable locations which accidentally escape the *general deluge* and the submergence of continents.

Such has been, such will be again and again the fate of the globe. Man beholds the traces of his labors all around him, finds everywhere, even deep down in the bowels of the earth, evidences of his great antiquity, and looks upon all as stable and enduring. He inquires of the pyramids, ascends their summits, wanders through their interior labyrinthian passages, and seeks to find the motives for their construction. He deciphers the inscriptions on their walls, and is astonished with the power and wisdom of those who made them. He finds their builders were interlopers from some other country, and at a very remote age. Human records fail to give the origin of these people, or the country from which they came. The antiquarian lends his aid. He finds the mounds and tumuli of America identical in general form, and evidently constructed for the same purpose, with those covering the vast *steppes* of Asia. The mounds are traced down the valleys of the Tigris and Euphrates, and a feeble idea of their magnitude is learned by exploring the ruined temple of Belus—the wonderful tower of Babel, of biblical story—on the site of ancient Babylon. As we follow the nomadic builders of those structures we overtake them in the valley of the Nile, driving out the native blacks, as they had already done in Asia, setting up a new civilization peculiarly their own, and erecting their mounds, towers and pyramids, each step of their progress marking an improvement on the preceding, the general idea and purpose of which their remote ancestors carried out with them from a continent which was gradually submerged, the inhabitants retiring before the incoming ocean. During the long periods of their journeyings, resting for centuries by the way, and again advancing, they reached that region, foreigners on a foreign shore, where we first find them at the commencement of the historic age, making aggressive inroads upon the native populations of Asia and Africa.

(TO BE CONTINUED.)

THE CANADIAN SPORTSMAN AND NATURALIST.

No. 2.

MONTREAL, FEBRUARY, 1882.

VOL. II.

WILLIAM COUPER, Editor.

TO OUR CORRESPONDENTS.

We shall be pleased to receive communications upon all matters relating to Sport and Natural History, and our columns will always be open to friendly discussions upon these subjects. We have to request, however, that our Correspondents omit all personalities from their manuscripts, otherwise we shall be obliged to refrain from publishing them.

Ed.

TOLING DUCKS.

Some birds are very susceptible to the promptings of curiosity, and advantage of this is taken by sportsmen to decoy them by very simple devices. The system of toling ducks, though not very generally known in Canada, has been practised in England and the United States for a great many years past.

Toling consists simply in attracting the birds to the shore, where the gunner remains concealed at some convenient spot, and is performed by a dog, taught to run up and down the beach, where the ducks are feeding, at some point not too far from shore. The discovery of this mode of decoying ducks was quite accidental, being attributed to a circumstance noticed by a sportsman, who, concealed behind a blind, patiently awaiting the approach of some Canvas Backs, observed that they suddenly lifted up their heads and moved towards the shore. Wondering at this unusual procedure he naturally looked around to discover the cause, and observed a young fox sporting on the river bank; and the ducks, all eagerness to gaze upon him, were steering their course directly for the shore. This mode of decoying, however, is confined to very few species of ducks, and can only be successfully practised early in the season,

before the birds have become too wary. Most dogs require very little training to become adepts at toling, and will usually keep in motion on the shore if they see a flock of ducks approaching. Canvas Back, Blue Bill and Red Head are the species generally procured, as they are also the most easily attracted by decoys. The writer, while snipe shooting at Lake of Two Mountains in the Autumn of 1878, was a witness to the success of this method of attracting ducks. Having seen a large flock of Red Heads feeding at a distance of about four hundred yards from the shore, a hiding place was selected, and a small pointer dog which accompanied us was allowed to run along the beach. At sight of the ducks the dog betrayed great eagerness and ran excitedly to and fro on the river bank, the ducks in the meantime perceived his movements and almost immediately turned their course towards shore. In a few minutes, more than fifty Red Heads were within range of our guns, some of them, in fact, not more than ten yards from the dog, and all apparently greatly interested in his motions. We had deferred firing as they were pretty well scattered in the water, but at last could restrain ourselves no longer, and as the smoke from our guns rolled away we gathered up five birds, which we considered not a bad result from our first experience in toling.

WALLACE.

CRACK SHOTS.

Some sportsmen enjoy the enviable reputation of being what are termed "crack shots," they have acquired such a degree of skill in the art of shooting that if a bird rises within range of their death-dealing tubes, no matter how dense the cover, or how difficult the shot, the unfortunate bird is doomed to destruction and is speedily consigned to the depths of their game bags! At least such is

often the impression of those who are not initiated into all the mysteries and uncertainties of shooting, and the "crack shot" is usually too proud of his reputation to dispel this illusion, or to keep any count of the misses he may make. Some few years ago the writer was in the habit of visiting a place not many miles from Montreal, and where there was a stretch of woods extending three or four miles in length, and in which, at that time, there were a good many Ruffed Grouse. During one of my visits the birds were pretty numerous, but I had by noon only succeeded in bagging two brace, one of these being a "pot shot," while I had missed at least a dozen shots, the cover in most places being very dense. While pursuing my sport numerous shots were fired from the other end of the wood, three or four reports in rapid succession made me aware that more than one gun was being employed, and that game was apparently plentiful. In a short time the hunting party approached near enough to enable me to recognize three well-known sportsmen and reputed "crack shots,"—feeling ashamed to appear before these gentlemen with only two brace, I quietly turned about and walked in another direction,—they had fired at least twenty shots, and from their "reputation" I concluded must have bagged nearly as many birds. Some days after, however, I happened to meet one of the gentlemen, and did not tell him of the result of my day's sport until I had ascertained that his party had, with a score of shots, only succeeded in bagging "one bird." I have since then been a firm believer in the uncertainty of Ruffed Grouse shooting and can confidently recommend this sport to any one ambitious to acquire the reputation of being considered a "crack shot."—WALLACE.

LOBSTER CULTURE.

The subject of Lobster culture has taken up the attention of Prof. S. F. Baird and the Fish Commissioners of the State of Maine. The Professor says:—

"There is a very great promise of success in cultivating lobsters on a large scale by inclosing them in small salt water bays, where there is a free circulation of water, and the egress of the lobsters can be prevented by grating or netting. They can be fed, as I understand, very largely upon clams, and will not only grow very rapidly under such circumstances, but carry on the propagation of the young. The young can either be kept in the inclosure or go out to sea and increase the supply in the vicinity. This is, by far, the most feasible way of solving the problem in regard to the depletion of lobsters along the coast of Maine and the Provinces. Is there any provision in the fishery laws of Maine by which an individual undertaking this work can prevent unauthorized persons from going in and reaping the benefit when the individual cultivator actually owns or leases the adjacent shore? Of course no man will be willing to go into the business unless he can be protected, and if there is no provision in Maine, as there is in Massachusetts, by which the Fish Commissioners can lease a pond to particular individuals for the purpose of propagating fish and secure to them thereby exclusive rights in the waters, it would be well to have such a provision, with the understanding that it is to apply to salt waters as well as to fresh. If the experiment proves as successful as I confidently anticipate and believe it will be, it will add enormously to the resources of the State; as there are hundreds of localities where such ponds could be established to the best advantage. Of course I suggest no interference with high seas navigation."

In the September and October numbers (Vol. I.) of this journal, we made a few remarks on the Canadian Lobster Fisheries. It may be further stated in connection with the subject, that in consideration of the extent of this industry in our Maritime Provinces, it would be well for those engaged in the business to consider the propriety of cultivating the lobster, as suggested by Professor Baird. There are many available localities along the Gulf seaboard where the cultivation of this valuable *crustacean* can be carried on with success. For instance, the Bay of Gaspé, and and at several places on the coast near Percé and Bonaventure. Prince Edward Island has also many excellent sites for this object.

Then, where can they be more profitably cultivated than on Anticosti? The numerous bays around the island are, at this day, teeming with them, and we are pleased to learn that a Company from New Brunswick is to take advantage of this fishery next season.—C.

THE ENGLISH SPARROW.

This European introduction, which at one time was looked upon with so much favour, is now pretty generally regarded as a pest; careful observations made during recent years having proved conclusively that these birds possess few redeeming qualities to compensate for the great amount of damage they are credited with doing. The Colony of Australia appears to realize the serious disadvantages of their introduction, their increase there has been so rapid, and their depredations so marked, that they are now considered an equal nuisance with the imported rabbit, and in that prolific land will probably be as difficult to get rid of. The Australian Government has lately offered a bounty of sixpence per dozen for the heads, and two and sixpence per hundred for the eggs, which will probably have the effect of reducing their numbers.

Here, in Canada, our severe winters have, to a certain extent, checked their increase, but they are in some places already too numerous, and ere many years will, no doubt, multiply to such an extent that we, also, may be obliged to adopt some means for their extermination.—WALLACE.

NEW BRUNSWICK SALMON RIVERS.

THE RIGHT TO FISH FOR SALMON.

A landowner, named Phair, was arrested while fishing with rod and line for salmon in the Miramichi river, opposite his own property. The arrest was made by W. H. Venning, the Inspector of Fisheries for New Brunswick. Phair refused to give up his fishing rod, &c., to the officer, but he yielded

when Venning presented a revolver. Phair brought an action for damages for the seizure of his tackle, and the suit was brought before the Circuit Court of Fredericton. The attorney for the Government moved for a nonsuit, on two grounds; first, that the defendant was acting in the capacity of a Justice of the Peace, and was entitled to one month's notice of action; and second, that the plaintiff was illegally fishing. The judge overruled both these objections, and charged in favour of the plaintiff on points of law, but he disagreed on the matter of damages. The jury, however, decided to award \$511. The Government or the Chief of the Fishery Department, with the consent of the Privy Council, should recognize riparian rights in navigable or unnavigable rivers where fish occur. It will save money and litigation, and the earlier this annoyance is abated the better for both parties.—C.

INTERNATIONAL FISHERIES EXHIBITION.

The approaching Fisheries Exhibition to be held in Edinburgh, Scotland, next April, will be open to all countries. It is under the patronage of the Duke of Edinburgh and the Highland Agricultural Society of Scotland. It will include everything connected with or as an illustration of the fisheries of the world. The exhibits are to be divided into twelve classes, embracing models of boats; of fishing-boat harbours and fishermen's houses; nets, lines, rods, artificial bait, tackle, piscicultural apparatus, fish ova, and young fry; stuffed fish and aquatic birds; paintings and casts of fish models, of fish passes and ladders; life boats, fishermen's dress and equipments; specimens of fresh, cured and canned fish; samples of preparation for preserving fish and specimens of such results; models and other means of illustrating the life, habits and social condition of those engaged in the fisheries; treatises on the pollution of rivers and the best means of remedying the evil. A loan collection will be included, and the Asso-

ciation will pay all charges of transportation in connection with this branch. There can be no doubt that the exhibition will be a most interesting one and will command widespread interest and attention.

PRINCE EDWARD ISLAND FISHERIES.

There has been a falling off in the catch of Mackerel, Cod and Herring this year, and the Salmon taken by the islanders are not worth reporting. Mackerel canning has become quite an industry, the annual average number of cans being about 200,000 put up on the Island. Of Lobsters 6,832,865 cans were filled this year. There is a reason for the present scarcity of Salmon in the Gulf of St. Lawrence. Why is it that from all portions of the North and South coasts we have reports regarding the rarity of this noble fish during the past three seasons? Cannot some one help us to discover the cause?

THE COMMON DOVE.

(*Zenaidura Carolinensis*.)

We have received the head, wings and tail of a specimen of the above bird shot by Mr. Comeau at Godbout, on the north shore of the Lower St. Lawrence. The occurrence of this Dove so far north is another illustration showing that as the Canadian climate gradually moderates, many birds which were heretofore in a great measure, confined to southern and western regions, will, eventually change their ranges of migration. If we had a few more close observers like Mr. Comeau, doubtless other rare species would be discovered visiting our northern forests.—C.

FISH AND GAME PROTECTION CLUB OF THE PROVINCE OF QUEBEC.

TWENTY-THIRD ANNUAL MEETING.

Mr. G. H. Mathews, Secretary of the Club, presented the annual report, from which it appeared that the Club had done good work during the past year, and was now in a flourishing condition.

From this report it appeared that the Club had commenced the year with a deficit of \$61.13; receipts during the year had been \$361.20; expenditure, \$251.21; balance on hand, \$43.86. The membership stood as follows at the end of the respective years:—1878, 30; 1879, 93; 1880, 101; 1881, 176.

The report was adopted.

The election of officers was then proceeded with, resulting as follows, viz.:—President, Ald. J. C. Wilson, re-elected; Vice-President, Mr. E. C. Monk, re-elected; Treasurer, Mr. W. H. Rintoul, re-elected; Secretary, Mr. G. H. Mathews, re-elected. Committee—Messrs. F. J. Brady, R. H. Kilty, H. R. Ives, I. H. Stearns, B. Goodacre, A. N. Shewan, L. A. Boyer, Selkirk Cross, Wm. Crowther, Chas. Stimson, W. S. Macfarlane, Fred. Henshaw, Jas. Appleton, Hon. J. R. Thibaudeau and Alderic Deschamp.

A Committee, consisting of the officers and members of the Club, was then appointed, with power to add to their number, to make arrangements for a picnic during the coming summer.

ORNITHOLOGY OF THE ISLAND OF MONTREAL.

BY ERNEST D. WINTLE.

The following list of birds, frequenting the Island of Montreal, has been prepared chiefly from observations made by the writer, extending over a period of several years. It is probable that a few species have escaped notice, as many remain only a short time on the island during their migrations north and south.

TURDIDÆ.—THRUSHES.

1. *Turdus migratorius*, Robin. Common. Arrives in March. Nests in May, June and July.
2. *Turdus mustelinus*, Wood Thrush. Common. Arrives in May. Nests in May and June.
3. *Turdus Pallasi*, Hermit Thrush. Rare. Arrives in May. Nests in June.
4. *Turdus Swainsoni*, Olive-backed Thrush. Rare. Arrives in May. Nests in June.
5. *Turdus fuscescens*, Wilson's Thrush. Common. Arrives in May. Nests in June.
6. *Mimus Carolinensis*, Catbird. Common. Arrives in May. Nests in June and July.
7. *Harporhynchus rufus*, Brown Thrush. Becoming numerous. Arrives in May. Nests in June.

SAXICOLIDÆ.—STONE CHATS AND BLUEBIRDS.

8. *Sialia sialis*, Eastern Bluebird. Common. Arrives in March. Nests in May, and raises two broods.

SYLVIIDÆ.—SYLVIAS.

9. *Regulus calendula*, Ruby-crowned Kinglet. Arrives in April. Abundant in spring and autumn.

10. *Regulus satrapa*, Golden-crested Kinglet. Arrives in April. Abundant in spring and autumn.

PARIDÆ.—TITMICE, CHICKADEES.

11. *Parus atricapillus*, Black-capped Chickadee. Not very common. Breeds on the Island.

SITTIDÆ.—NUTHATCHES.

12. *Sitta Carolinensis*, White-bellied Nuthatch. Winter and summer resident. Nest, 20th April, with 9 eggs.

13. *Sitta Canadensis*, Red-bellied Nuthatch. Winter and summer resident. Nests in April.

14. *Certhia familiaris*, Brown Creeper. Not common. Arrives in April. Nests in May.

TROGLODYTIDÆ.—WRENS.

15. *Troglodytes aedon*, House wren. Not common.

16. *Anorthura hyemalis*, Winter Wren. Not common. Arrives in April. Breeds on the Island.

ALAUDIDÆ.—LARKS.

17. *Eremophila alpestris*, Shore Lark. Nest found beginning of April with young; snow on ground. Abundant in autumn.

MOTACILLIDÆ.—WAGTAILS.

18. *Anthus ludovicianus*, Titlark. Abundant in spring and autumn.

SYLVICOLIDÆ.—WARBLERS.

19. *Mniotilta varia*, Black and white Creeper. Common. Arrives early in May. Nests in June.

20. *Parula Americana*, Blue yellow-backed Warbler. Arrives early in spring.

21. *Dendroica aestiva*, Summer Warbler. Common. Arrives in May. Nests in June.

22. *Helminthophaga chrysoptera*, Blue golden-winged Warbler. Arrives early in spring.

23. *Dendroica virens*, Black-throated green Warbler. Arrives early in spring.

24. *Dendroica cerulea*, Black-throated blue Warbler. Arrives early in spring.

25. *Dendroica coronata*, Yellow-rumped Warbler. Arrives early in spring.

26. *Dendroica Blackburnia*, Blackburnian Warbler. Arrives early in spring.

27. *Dendroica striata*, Black-poll Warbler. Arrives early in spring.

28. *Dendroica castanea*, Bay-breasted Warbler. Arrives early in spring.

29. *Dendroica Pennsylvanica*, Chestnut-sided Warbler. Arrives in May. Nest 11 June, 3 eggs and 1 cowbird's egg, all incubated.

30. *Dendroica maculosa*, Black and yellow Warbler. Arrives early in spring.

31. *Dendroica pinus*, Pine-creeping Warbler. Arrives early in spring.

32. *Seiurus aurocapillus*, Golden-crowned Thrush. Common. Arrives in May. Nest, 5 June, 4 eggs.

33. *Geothlypis trichas*, Maryland yellow-throat. Common. Arrives in May. Nests in June.

34. *Geothlypis Philadelphia*, Mourning Warbler. Arrives early in spring.

35. *Myiodynastes Canadensis*, Canadian Fly-catching Warbler. Arrives in May. Breeds here.

36. *Setophaga ruticilla*, Redstart. Common. Arrives in May. Nests in June.

TANAGRIDÆ.—TANAGERS.

37. *Pyrranga rubra*, Scarlet Tanager. Not common. Arrives in May.

HIRUNDINIDÆ.—SWALLOWS.

38. *Hirundo horreorum*, Barn Swallow. Common. Arrives in May. Nests in June.

39. *Tachycineta bicolor*, White-bellied Swallow. Common. Arrives in April. Nests in May and June.

40. *Petrochelidon lunifrons*, Eave Swallow. Arrives in May. Nests in June.

41. *Cotyle riparia*, Bank Swallow. Common. Arrives in May. Nests in May and June.

42. *Progne purpurea*, Purple Martin. Common. Arrives in May. Nests in June.

AMPELIDÆ.—WAXWINGS, ETC.

43. *Ampelis garrulus*, Bohemian Waxwing. Rare visitant.

44. *Ampelis cedrorum*, Cedar bird. Common summer resident, occasionally seen during winter. Nests in July.

VEREONIDÆ;—VIREOS, OR GREENLETS.

45. *Vireo olivaceus*, Red-eyed Vireo. Common. Arrives in May. Nests in June.

LANIIDÆ.—SHRIKES.

46. *Lanius borealis*, Great Northern Shrike. Occasionally seen during winter. Nests found in May.

47. *Lanius ludovicianus*, Loggerhead Shrike. Has been shot here.

FRINGILLIDÆ.—FINCHES, ETC.

48. *Pinicola enucleator*, Pine Grosbeak. Autumn and winter visitant.

49. *Carpodacus purpureus*, Purple Finch. Not common. Arrives in May. Nests late in June.

50. *Loxia leucoptera*, White-winged Crossbill. Not common. Summer and winter resident. Nests end of March.

51. *Loxia curvirostra*, Common Crossbill. Autumn and winter visitant.

52. *Ægiophus linaria*, Red-poll Linnet. Autumn and winter visitant.

53. *Chrysomitris pinus*, Pine Linnet. Arrives early in spring.

54. *Chrysomitris tristis*, American Goldfinch. Common. Arrives in May. Nests in July.

55. *Plectrophanes nivalis*, Snow Bunting. Autumn and winter visitant.

56. *Poecetes gramineus*, Grass Finch. Common. Arrives in May. Nests end of May.

57. *Melospiza palustris*, Swamp Sparrow. Not common. Arrives in May. Nests in June.

58. *Melospiza melodia*, Song Sparrow. Common. Arrives in April. Nests in May, June and July.

59. *Junco hyemalis*, Snowbird. Common. Arrives in April. Nest, 15 June, 2 eggs.

60. *Spizella monticola*, Tree Sparrow. Not common.

61. *Spizella socialis*, Chipping Sparrow. Common. Arrives in May. Nests in June and July.

62. *Spizella pusilla*, Field Sparrow. Arrives early in spring.

63. *Zonotrichia albicollis*, White-throated Sparrow. Not common. Arrives early in spring. Nests in April.

64. *Zonotrichia leucophrys*, White-crowned Sparrow. Not common. Arrives early in spring.

65. *Passer domesticus*, English Sparrow. Abundant. Nests very early in spring, and throughout the summer

66. *Goniaphea ludoviciana*, Rose-breasted Grosbeak. Rare, spring visitant.
 67. *Cyanospiza cyanea*, Indigo bird. Common. Nests in June and July.

ICTERIDÆ.—AMERICAN STARLINGS.

68. *Dolichonyx oryzivorus*, Bobolink. Common. Arrives early in spring. Nests in May.
 69. *Molothrus ater*, Cowbird. Common. Arrives in April. Have found its eggs in nests of Phoebe, Wood Thrush, Redstart, Summer Warbler, Chestnut-sided Warbler, and Song Sparrow.
 70. *Agelaius phoeniceus*, Red-winged Blackbird. Common. Nests in May and June.
 71. *Icterus Baltimore*, Baltimore Oriole. Become common. Arrives in May. Nests in June.
 72. *Scolecophagus ferrugineus*, Rusty Grackle. Spring and autumn visitant.
 73. *Quiscalus purpureus*, Crow Blackbird. Common. Arrives in April. Nests in May.

CORVIDÆ.—CROWS, JAYS, ETC.

74. *Corvus Americanus*, Common Crow. Arrives in March. Nests in April. A few usually remain throughout the winter.
 75. *Cyanurus cristatus*, Blue Jay. Autumn visitant.
 76. *Perisoreus Canadensis*, Canada Jay. Autumn visitant.

TYRANNIDÆ.—FLYCATCHERS.

77. *Tyrannus Carolinensis*, Kingbird. Common. Arrives in May. Nests in June.
 78. *Myiarchus cinetus*, Great crested Flycatcher. Common. Arrives in May. Nests in June.
 79. *Sayornis fuscus*, Phoebe. Common. Arrives in April. Nests in May.
 80. *Contopus borealis*, Olive-sided Flycatcher. Not common.
 81. *Contopus virens*, Wood Pewee. Common. Arrives in May. Nests in June.
 82. *Empidonax flaviventris*, Yellow-bellied Flycatcher. Not common.

CAPRIMULGIDÆ.—GOATSUCKERS.

83. *Antrastomus vociferus*, Whip-poor-will. Rare visitant.
 84. *Chordeiles Virginianus*, Nighthawk. Common. Arrives 15th May. Nests end of May on gravelled roofs of houses in the city.

CYPSELIDÆ.—SWIFTS.

85. *Chaetura pelagica*, Chimney Swift. Common. Arrives in April. Nests in May, in chimneys of houses in the city.

TROCHILIDÆ.—HUMMINGBIRDS.

86. *Trochilus colubris*, Ruby-throated Hummingbird. Common. Arrives early in May. Nests end of May.

ALCEDINIDÆ.—KINGFISHERS.

87. *Ceryle alcyon*, Belted Kingfisher. Common. Arrives in April. Nests in May.

CUCULIDÆ.—CUCKOOS.

88. *Coccyzus erythrophthalmus*, Black-billed Cuckoo. Common some seasons, and scarce others. Nests end of May.
 89. *Coccyzus Americanus*, Yellow-billed Cuckoo. Very rare, only one specimen is recorded to have been shot.

PICIDÆ.—WOODPECKERS.

90. *Hylotamias pileatus*, Pileated Woodpecker. Rare autumn or winter visitant.

91. *Picus villosus*, Hairy Woodpecker. Regular spring and autumn visitant. Occasionally seen in summer.

92. *Picus pubescens*, Downy Woodpecker. Common. Winter and summer resident. Nests end of May.

93. *Picoides arcticus*, Black-backed Woodpecker. Casual visitant.

94. *Sphyrapicus varius*, Yellow-bellied Woodpecker. Common. Nests in May and June.

95. *Melanerpes erythrocephalus*, Red-headed Woodpecker. Not common. Nests in May.

96. *Colaptes auratus*, Golden-winged Woodpecker. Common. Arrives in April. Nests in May.

(TO BE CONTINUED.)

Correspondence.

ROBINS AGAIN.

To the Editor of the CANADIAN SPORTSMAN AND NATURALIST:—

SIR,—The October number of your journal having failed to reach my hands until to-day when, through your politeness, I received a supplementary copy, I have only just read John H. Garnier's letter on "Robins again," which appears in that impression. With the courtesy which pervades the whole of his communication he remarks that he is "surprised and sorry to see such ignorance exhibited by me," but he does not favour me by specifying the nature of that ignorance. I gather, however, from his very rambling letter, that he imagines I have confounded the English Redbreast with the American Robin. I need not assure you, Sir, that I did nothing of the kind, and that the accusation of ignorance is as gratuitous as it is unmannerly. As John H. Garnier, however, has thought fit to prefer this accusation against me, I may perhaps be permitted to counsel that person, before he hazards such a charge again, to be a little more careful in respect of his own communications. For instance, I would recommend him to study English grammar a little, and I would advise him to make himself acquainted with the phraseology of sportsmen, and not speak of "a pair of rabbits;" and above all, I would suggest that when he quotes Latin he would get some one who knows a little of that language to scrutinize his quotation, and then perhaps he will not make Sallust appear to have been as unfamiliar with the Latin grammar as he evidently is himself. I might have answered his letter more at length but that his style of writing is not such as to make any gentleman desirous of entering into a paper controversy with him. His pen does not want the "additional vim" with which

he threatens me, without, however, alarming me, but it certainly *does* require a little additional culture.

VINCENT CLEMENTI.

Peterboro, January 12, 1882.

NOTE.—With the above letter from Mr. Clementi we must now close our columns to any further correspondence on this subject.—Ed.

THE MESSINA QUAIL.

DEAR SIR,—From the extensive orders sent to Sicily, for migratory quail, it is evident that earnest efforts will be made next spring to introduce and naturalize in Canada this valuable bird. Col. Rhodes, who takes a lively interest in the success of the scheme, now absent from the city, has forwarded me the enclosed directions for keeping quail in confinement, previous to letting them loose in our woods. I crave a corner in your journal for their insertion.

J. M. L.

Quebec, Jan. 20, 1882.

QUAIL IN CONFINEMENT.

To Editor Forest and Stream :

Having kept quail in confinement several seasons for stock, I will give my experience. I make a square coop large enough to keep from eight to ten pairs. Two-thirds of the way I put in a partition, with a hole in centre of this partition large enough for them to run through into the rear part. This hole contains a slide-door from top on outside, so that the birds can be shut in while cleaning the front, and *vice versa*. The front is made entirely of slats, placed so near that they cannot get their heads through to injure them. The back part is made quite dark, with door for cleaning; in front part is a trough to slide, with end projecting so as to give fresh water *often*. They require their dust bath in confinement every day. This I provided for by sweeping very dry dirt from some sunny places about a shed, placing it in the front part of the coop. For feed, oats, buckwheat and wheat screenings, given alternately. I made my coops six (6) feet long, four feet wide and two high. Top is of boards with holes bored in. These coops two men carry every morning into a warm sunny place, and at night they are returned into a building and placed on stools as high as convenient, and are made to stand well out from the side of the building.

The legs of bench should be covered with tin or something to prevent rats or mice getting at the birds. In the above manner I have kept them without losing a single bird.

WARREN LOWE.

West Haven, January 6, 1882.

NOTE.—The introduction of these Quail into Canada has not yet been a success; most of the birds having been liberated late in the season. Some few broods were reared, but it has not yet been proved whether any returned during the following spring. Further efforts are now being made by keeping the birds in confinement during winter and liberating them as early as possible in spring; a better opportunity will then be afforded them of maturing their young. A gentleman of this city has had a number in confinement during last year and experienced no difficulty in keeping them.

THE RED CROSSBILL.

(*Loxia curvirostra*.—LIN.)

As comparatively little is known of the history of the Crossbills, I send a statement of my observations. About twenty years ago the above species was a common resident in this vicinity. During the months of December and January they gathered in small flocks, and evidently commenced to pair. Occasionally I have seen the white-winged species, but these never associated with their congeners. Every one is familiar with the peculiar flight of the yellow bird (*Chrysomitris tristis*) during the nuptial season. Exactly in a similar manner the red Crossbill spreads its wings and tail, and flies in a fantastic manner on sunny days. The female, in the mean time, may be seen perched on some neighbouring sprig or prominent place seeming to enjoy the gambols of the male. Early in the morning they betake themselves to the hemlock, pine, or tamarac ridges, and may be seen at all altitudes and in all positions on the cones in search of food. Sometimes, head downwards, or holding with claws and bill directly beneath the cones, and tearing the seed from its covering with much ease. Their motions are graceful, and have nothing of the jerk peculiar to the Sittæ or Picoidæ.—About two o'clock, they fly to some neighbouring place to pick sand, and I have seen as many as two hundred at one time about ash heaps, on bare spots on the road, or

on the banks of a stream where they could obtain sand. They are harmless, familiar little birds, and are very quiet in their manners, as I never saw any encounters, nor those battles that so often occur among English sparrows and other finches. The nests are generally placed near the extremity of a hemlock or cedar branch, and are large and very thick for the size of the builder. They are variously lined with bits of small roots, fibres of vegetables, hair, feathers and the like, but of course vegetable fibres predominate. I have frequently seen the head and a little portion of the tail of the bird project over the side of a nest, when on, or nearly on a level, but never from below. Although I saw numbers of nests, I never obtained any eggs. The fact is I never tried, as the thought did not at the time occur to me. I, however, obtained many fine and beautiful specimens of *L. curvirostra* as well as *L. leucoptera*. These birds breed early in March or towards the end of January and during February. I am unable to state exactly how many eggs they lay, nor the period of incubation. On the 24th of March, 1862, I saw a female crossbill feeding her young; there were four of them, closely huddled together on a maple twig. I shot three of them, the fourth and the old bird escaping seemingly unhurt. I carefully examined the young; they were of a greenish brown color, and there was down on the ends of their feathers, especially on the head and back. The tail was more than half grown, and the flight of the young bird that escaped, seemed very strong. The bills of the young were not in the least crossed, and this proves that the beaks take this form as they arrive at maturity; the appearance was like that of any young finch. It strikes me, that their bills were too tender to procure food, and that the parents fed them for a longer period than is general in the finch family. But since that period the axe has done its work. We find no more of this species in the neighbourhood as it has little to live on. Occasionally in Spring before the foliage comes on the trees, families of five or six pass around, but every year they are becoming more scarce, and I have neither heard nor seen one for four or five seasons past. The nest, is, as has been stated, very thick, compact, and large; nature has taught the bird so to construct it, as otherwise the eggs and young birds would be frozen. The crops of the three procured were quite distended with hemlock seeds. The external covering in every case was removed and each

seed was bruised, and covered with a peculiarly glutinous fluid, either so given by the old bird, or produced in the crop of the young ones; perhaps as in parent parrots. Although these birds chirp continually while on the wing, yet I never recollect hearing them sing, and they are very silent when on the ground and when feeding on trees. But, the moment a note of alarm is given, they rise altogether with much noise, and after flying about for a moment, to see that danger has passed, they settle down, frequently on the same tree, in perfect silence, seeming intent in procuring food. The peculiarity of the bill, is wonderfully designed to open the scales of fir cones, on which this family feeds, and this point has been discussed by abler pens. But though one is sad to know that they are very seldom seen in this locality, yet noble farms and happy homes take the place of the wild woods where these birds formerly had their habitation. It seems remarkable that crossbills should breed so early in the year. It is not at all strange in any of these months, to see the thermometer frequently below zero. Their food is at this time abundant, and continues so until summer, and it seems improbable that food supply is the cause of such early incubation. These statements are true, but why this little bird breeds during the coldest period of a Canadian winter, who can tell? Mr. Maynard in his "Naturalists' Guide," mentions a gentleman in Maine who obtained the eggs. This Naturalist, whose name I forget, also avers that he procured the eggs in February, and if I only had such a chance as in 1862 to collect, I would certainly lay past a large store of them. Crossbills are indifferent to cold, and I have observed them, in a heavy snow storm, feeding with great composure. I have seen them in considerable numbers in Beverly township near Hamilton. I presume they migrate north in summer. I never remember seeing them before December, nor after the beginning of May. I should like to see the observations of others on the life history of this species, especially any theories or facts that might help to elucidate the cause of its winter incubation. I have heard parties deny that the crossbill or any other little bird, could incubate so early, but this is because they have not had the opportunity to prove it as I have; and, I confess, I was skeptical till I saw the birds, both male and female, incubating, and obtained the young.

J. H. GARNIER.

LUCKNOW, January, 1882.

THE CANADIAN SPORTSMAN AND NATURALIST.

No. 3.

MONTREAL, MARCH, 1882.

VOL. II.

WILLIAM COUPER, Editor.

A COMPARISON OF THE GAME LAWS OF ONTARIO AND QUEBEC.

The growing scarcity of many of our game birds and quadrupeds is a matter of great interest to sportsmen, all of whom should unite in their efforts to prevent this diminution. That the extension of the period of our close seasons would be of great benefit, we do not think will be denied, and no true sportsman should object to a curtailment of his privileges, in this respect, when the object to be attained will ultimately be the means of providing him with increased pleasure. There is a marked difference in the protection afforded by the Game Laws of Ontario and Quebec, and the assimilation of some of the close seasons could not fail to be of benefit to this Province.

A synopsis of the Game Laws of the two Provinces shows the close seasons to be as follows:—

	ONTARIO.	QUEBEC.
Deer and Caribou..	15 Dec. to 1 Oct.	1 Feb. to 1 Sept.
Moose.....	do	do
Grouse Ptarmigan, &c.	1 Jan. to 1 Sept.	1 March to 1 Sept.
Wild Turkey and Quail	1 Jan. to 1 Oct.	
Woodcock.....	1 Jan. to 1 Aug.	1 March to 1 Sept.
Snipe.....	1 Jan. to 15 Aug.	1 March to 1 Sept.
Mallard, Gray Duck		West of Three Rivers
Black Duck, Wood Duck	1 Jan. to 15 Aug.	1 May to 1 Sept.
Other Ducks.....	1 May to 15 Aug.	East of Three Rivers
Swans and Geese...	do do	15 May to 1 Sept.

Thus, in Ontario, Virginian deer and Moose are protected from 15th December, although the open season is one month later than in Quebec, the wisdom of this is apparent from the fact that these animals fall an easy prey to the hunter in winter, especially in the month of January, when the deep snow and the crust formed by the frost and sun, prevent their escape; the Caribou, however, from its lighter weight and the peculiar

formation of its hoofs is enabled to move very rapidly through deep snow, and is seldom run down by the hunter. Ruffed Grouse are protected from 1st of January in Ontario, while our open season extends until 1st March; the long winter affording the *habitant* an opportunity to try his hand at snaring, as he has seldom anything else to occupy him at this time of year. It is well known that the greater number of these birds with which our markets are supplied, are procured by this means, and it is hardly possible to obviate this, except by making winter a close season. Ruffed Grouse are very easily snared, and to the depredations of the market hunters alone, must the scarcity of these birds be attributed. The Fish and Game Societies of the Province of Quebec have been endeavouring to obtain an amendment to the Act for the Protection of Game, prohibiting the spring shooting of ducks. This is a much needed reform, as from a statement submitted by the Secretary of the Montreal Club, no less a number than 1000 brace of Black Duck were exposed for sale in the Montreal markets last spring. These birds, as well as Mallard, Wood Duck, &c., are protected during the spring in Ontario, and we cannot understand how our Government should tolerate such a destruction in the breeding season. If our legislators are not sportsmen, they should, at least, have a slight knowledge of political economy, and recognize that game is one of the resources of the country, which should be conserved like any other product. A bill to abolish spring shooting was presented last session, but owing to the opposition which it received, was withdrawn; we trust, however, it will not be abandoned and that when again presented, both parties in the House may unite in passing this much needed amendment. The great difficulty with all game laws is to secure their proper observance, especially in remote sections of the

country. If it were possible to prevent the snaring of Ruffed Grouse, the present protection would, no doubt, be ample; as it is, however, the *habitants* pursue their work of trapping unmolested, and the only feasible way of stopping this would seem to be by prohibiting the sale of these birds after a specified time; the law would not then be violated to such an extent as the market hunters would not be able to dispose of their game and would in consequence restrict their efforts to obtaining a supply sufficient for their own use.—WALLACE.

THE DESTRUCTIVE BRUSH WEIRS.

That there is cause for the decrease of Salmon along the shores of Nova Scotia, New Brunswick and the tributaries of the St. Lawrence, cannot be denied. They have steadily decreased in these waters since 1841. The blame for paying high prices for this wholesome food, must rest on the shoulders of the Government, who have allowed the inhabitants residing along the sea-board to erect "Stake or Barrier Nets" and "Brush Weirs." The "Stake-Net" is a Scotch invention introduced into Canada about the year 1818, and they have been found effective modes of capture, by intercepting the fish in their approaches to the rivers. They are formed of strong netting attached to "Stakes" driven into the shore, and these nets extend from high to low water mark; thus placed before the course of the fish on their way to the breeding grounds. The "Stake-Net" terminates in a chamber or trap from which there is no escape. The "Brush Weir" is more destructive; composed of wicker-work or brush-wood, it also has a chamber with a narrow entrance wherein all kinds and sizes of fish are caught at the ebb of the tide. These destructive traps are self-acting, working night and day. Although the fishery regulations require an open space to be made in the lower part of the chamber to be covered with net-work to

admit the passage of small fishes, the provision is defeated by quantities of seaweed and other floating substances which close the netting at every tide. We advise the Government to destroy every one of these watling fences at once and forever. "Stake-Nets" should be absolutely abolished in the Lower St. Lawrence. In 1841, Salmon were abundant; 50,000 being the annual catch on one of the Labradorian rivers, and during the latter year, 1,800 Salmon were taking during one tide at Tadousac. Other rivers along the Lower St. Lawrence were then equally productive, but the "Weirs" and "Stake-nets" extended rapidly, and since then Salmon, Shad, Cod, Herring, Striped and Sea-Bass have been annually destroyed by "Brush Weirs." These engines when first placed in Scottish and Irish waters, produced profitable returns to the Weir-holders; but, during this time, destructive results so far as regarded the propagation of Salmon. The British Government became alarmed, and a scientific commission was appointed to make enquiry as to the cause. The following is an extract from the Report of Sir William Jardine, one of the Commissioners. It speaks for itself.—

"In advertent to the evil done to the Fisheries by the use of these fixed barriers, and in pointing out the course believed to be indispensable to preserve what remains of these Fisheries, may be interfering with the gains of a few, who, in large estuaries or other favored localities, still reap a precarious harvest from their use; but I hold it to be due to the public that the destruction caused by the modes of fishing hitherto and still practised should be frankly indicated without regard to the private gains of any individual. There is no doubt that the longer these obnoxious Engines are permitted to exist the more difficult will be their removal. The instances in older countries of the destitution, the riots, the bloodshed and loss of life caused by these nuisances to fishing and navigation ought to be a warning to us."

Here in Canada, we have a Fishery Department which is cognizant of the fact that these "Brush Weirs" are annually a source of

profit to the owners; and, furthermore, it is aware that these traps destroy millions of young fish at every tide and no action has been taken to abolish them, or stop their increase. Why should this be allowed any longer? We have Salmon rivers in the three Provinces mentioned, which were heretofore unequalled on this earth,—rivers which by expending a small amount on each, would ultimately produce a large return to those who would lease them—that would be annually a source of large revenue to the country. We are determined not to lose sight of this subject, and shall keep the matter before the public until we see justice done. We call for the destruction of "Brush Weirs," as they are the worst enemies of the young of fishes inhabiting the saline waters in the Gulf of St. Lawrence. They look ugly, adding no natural feature to a maritime view; are dangerous to navigation, and the sooner they are destroyed the better for the fish and the country.—C.

ORNITHOLOGICAL QUERIES.

The Sparrow Owl, *Nyctale Richardsonii*, Bonaparte. We want accurate information regarding the nest of this owl. Does it lay its eggs in a tree cavity, or on the ground? Has it been found nesting in Canadian forests south of the parallel of 50° north latitude? Mr. Vennor wrote to the *Montreal Witness*, some time ago, that he discovered its nest on the ground near one of our northern rivers.

The Saw-Whet Owl, *Nyctale Acadica* Bonaparte. The nest of this species has been found in Nova Scotia, but its nesting habits do not agree with the above Genus. Did anyone find its nest in the woodlands of Quebec or Ontario? The eggs of these two species are *desiderata* in Oölogical cabinets.

The Snowy Owl, *Nyctea nivea*, Gray. In accordance with the severity of the weather, this owl comes down to latitude 42° about the end of December, remaining about the fields and woodlands until the middle of February, if the temperature is mild. This bird has been seen in summer on the mountain regions on the Upper Godbout, where they are supposed to breed. We wish to obtain additional observations regarding the summer habits of this species.

The Hawk Owl, *Surnia ulula*, Bonaparte. Arrives about latitude 46° in October and November, sometimes in great numbers. We want some definite knowledge respecting the nesting localities of this species. Has its nest been found in Canada? Mr. Henry Reeks, F.L.S., an Ornithologist who remained two years on Newfoundland, says that it is, perhaps, the most common owl on the island, remaining there throughout the year. They occur abundantly along the southern coast of Labrador during the latter month, returning north as the weather moderates.

The Banded three-toed Woodpecker, *Picoides hirsutus*, Vieill. We have not yet noticed this bird in the Province of Quebec, but Mr. Reeks says that although not common, it is non-migratory on the Island of Newfoundland. We have found the nest of its congener *P. arcticus* on the 3rd of June, about two degrees north of Montreal; and, doubtless the nest of *P. hirsutus* may be obtained during the latter month in Newfoundland. Its discovery would be a rare prize to the Oölogist.

The Striped three-toed Woodpecker, *Picoides dorsalis*, Baird. I found one specimen of this species north of the City of Quebec, and it is probable that it breeds in the same latitude as *P. arcticus*. Can any Ornithologist give additional information regarding its summer habitat?

The Whip-poor-Will, *Antrostomus vociferus* Bonaparte. Occurs rarely in the Province of Quebec. I heard its call on a mountain adjacent to Lake Beauport, near Quebec, which is probably its most northern range. Has its nest been found in latitude 45°?

The Winter Wren, *Troglodytes hyemalis*, Vieill. Has the nest of this delightful songster been found in the Province of Quebec? Mr. Reeks says it is common, and a resident throughout the year in Newfoundland. I have seen it on Mount Royal in spring, but could not discover the nest. I saw it also at Godbout, on the Lower St. Lawrence in June, where it doubtless breeds.

The Red-bellied Nuthatch, *Sitta Canadensis*, Linn. This bird is common in our woods in spring; has the nest been discovered in New Brunswick, Ontario or Quebec?

The Hudsonian Titmouse, *Parus Hudsonicus*, Forster. This Titmouse appears in latitude 56° about the beginning of October, generally in company with the Genus *Regulus* and *Pinicola*. On the approach of spring, the Hudsonian Titmouse returns to high latitudes

to breed. Mr. Reeks mentions it as common, and non-migratory in Newfoundland and Audubon, I believe, was the first lucky man who found the nest of this species. A youth residing at Godbout discovered the second, last year. Who will find the next? Now, that Newfoundland, is to be traversed by the iron horse, many facilities will be offered to reach the *habitat* of this and many other rare northern species. We are anxious to hear more of this Titmouse and its nest, which is so elaborately described by Audubon.

The Pine Grosbeak, *Pinicola Canadensis*, Briss. Mr. Reeks tells us that this Grosbeak, is common in Newfoundland throughout the year. It must, therefore, bring forth its young there. It ranges south to latitudes 43° or, probably, further in severe winters. Has the nest been discovered in Canada, or did anyone notice the bird in our forests during summer?

The Semipalmated or Ring Plover, *Aegialitis semipalmatus*, Bonaparte. This beach bird breeds on Newfoundland. Did any Oölogist find its nest of late in Canada? They bred during Audubon's time, on the north coast of the Lower St. Lawrence.—C.

MONTREAL BRANCH, ENTOMOLOGICAL SOCIETY OF ONTARIO.

The eighty-seventh meeting of this Society was held at the residence of the President, H. H. Lyman, Esq., on the 7th January last.

Mr. G. J. Bowles, read a paper, entitled "The Pickled Fruit Fly," *Drosophila ampelophila*, Leow, giving a description of this curious insect, illustrated by drawings under the microscope of the larva and pupa, and specimens of the fly. It is of the same genus as the well-known "Wine Fly," and has somewhat similar habits.

A letter from W. H. Edwards, of Coalburgh, Virginia, was read, enquiring about the forms of *Lycaena lucia* found at Montreal. Many specimens of the butterfly were examined, and the conclusion arrived at that the commonest form at Montreal, was not the type, but a variety, intermediate between the type and *violacea*.

A large collection of rare and beautiful Sphingidae and other Lepidoptera were exhibited by the President.

The eighty-eighth meeting was held on 14th February, at the residence of the Secretary.

Mr. G. J. Bowles, read a paper on the "Genera *Hepialus* and *Sthenopsis*," noting the capture here last summer of a very rare moth, *H. thule*, Strecker, only one other specimen of which is known to be in collections.

Mr. J. G. Jack, exhibited some large larvae, supposed to be *Hepialidæ*, still alive in their tunnels, bored in the roots of swamp-maple.

The President communicated some interesting particulars regarding *Callimorpha* and other Bombycidae, which he had gathered during a recent visit to the museums in Boston.

Several boxes of Lepidoptera were exhibited, and some species new to this locality noted.

Thomas Craig, Esq., and W. W. Dunlop, Esq., were added to the roll of the Society at this meeting.

ORNITHOLOGY OF THE ISLAND OF MONTREAL.

BY ERNEST D. WINTLE.

(Continued.)

97. *Bubo Virginianus*, Great-Horned Owl. Autumn and winter visitant.

98. *Scops asio*, Mottled Owl. Autumn, and winter visitant.

99. *Otus vulgaris*, Long-eared Owl. Summer and winter resident; breeds here occasionally.

100. *Brachyotus palustris*, Short-eared Owl. Casual visitant.

101. *Syrnium cinereum*, Great gray Owl. A beautiful specimen was shot near the wheel-house on the 11th of February.

102. *Syrnium nebulosum*, Barred Owl. Autumn visitant.

103. *Nyctea nivea*, Snow Owl. Autumn, and winter visitant. One specimen shot opposite Nun's Island on the 11th of February.

104. *Surnia Hudsonica*, Hawk Owl. Winter visitant.

105. *Nyctale Richardsonii*, Richardson's or Tengmalm's owl. Winter visitant.

106. *Nyctale Acadica*, Acadian Owl. Winter visitant.

FALCONIDÆ (DIURNAL).—BIRDS OF PREY.

107. *Circus Hudsonius*, Marsh Hawk. Immature birds common. Adults very rare.

108. *Accipiter fuscus*, Sharp-shinned Hawk. Common.

109. *Astur atricapillus*, Goshawk. Rare visitant.

110. *Falco communis*, (anatum) Duck Hawk. Very rare visitant.

111. *Falco sparverius*, Sparrow Hawk. Not common.

112. *Buteo borealis*, Red-tailed Buzzard. Rare, 1 specimen shot in autumn of 1881.

113. *Buteo lineatus*, Red-shouldered Buzzard. Most common Hawk. Breeds in April.

114. *Buteo Swainsoni*, Swainson's Buzzard. Rare visitant.

115. *Buteo Pennsylvanicus*, Broad-winged Buzzard. Not common.

116. *Archibuteo lagopus*, Rough-legged Buzzard. Rare visitant in fall.

117. *Pandion haliaetus*, Fish Hawk. Rare visitant in summer.

118. *Haliaetus leucocephalus*, Bald Eagle. Rare visitant.

COLUMBIDÆ.—PIGEONS.

119. *Ectopistes migratorius*, Wild Pigeon. Not common. Spring and autumn visitant.

TETRAONIDÆ.—GROUSE, etc.

120. *Bonasa umbellus*, Ruffed Grouse. Abundant in food producing localities. Summer and winter resident. Nests in April.

CHARADRIIDÆ.—PLOVERS.

121. *Squatarola helvetica*, Black-bellied Plover. Spring and autumn migrant.

122. *Charadrius Virginicus*, Golden Plover. Spring and autumn migrant.

123. *Ægialitis vociferus*, Killdeer Plover. Not common. A few breed here.

124. *Ægialitis Wilsonius*, Wilson's Plover. Casual visitant.

125. *Ægialitis semipalmatus*, Semipalmated Plover, or Ringneck. Spring and autumn visitant.

126. *Ægialitis melodus*, Piping Plover, or Ringneck. Spring and autumn visitant.

127. *Ægialitis cantianus*, Snowy Plover. Rare visitant.

SCOLOPACIDÆ.—SNIPES, etc.

128. *Philohela minor*, American Woodcock. Arrives beginning of April; a few pairs remain throughout the summer and probably breed here.

129. *Gallinago Wilsoni*, Wilson's Snipe. Spring and autumn visitant.

130. *Macrorhamphus griseus*, Red-breasted Snipe. Spring and autumn visitant. Rare.

131. *Tringa minutilla*, Least Sandpiper. Spring and autumn visitant.

132. *Tringa maculata*, Pectoral Sandpiper. Spring and autumn visitant.

133. *Totanus flavipes*, Yellow-shanks. Spring and autumn visitant.

134. *Totanus solitarius*, Solitary Tattler. Spring visitant.

135. *Totanus melanoleucus*, Greater Tattler. Rare in spring; the young common in autumn.

136. *Trinigoides macularius*, Spotted Sandpiper. Summer resident. Nests beginning of June.

ARDEIDÆ.—HERONS.

137. *Ardea herodias*, Great Blue Heron. Spring and summer visitant. Young common in the fall.

138. *Nycticorax grisea*, Night Heron. Summer resident. Nests end of May on Nun's Island, above Victoria bridge.

139. *Botaurus minor*, Bittern. Summer resident. Nests end of May.

RALLIDÆ.—RAILS, etc.

140. *Rallus elegans*, Fresh-water Marsh Hen. Summer resident. Nests beginning of June.

141. *Rallus Virginianus*, Virginia Rail. Summer resident. Nests beginning of June.

142. *Porzana Carolina*, Carolina Rail. Summer resident. Nests beginning of June.

143. *Fulica Americana*, Coot. Summer resident. Nests beginning of June.

ANATIDÆ.—GEESSE, DUCKS, etc.

144. *Branta Canadensis*, Canada Goose. Spring and autumn migrant.

145. *Anas boschas*, Mallard. Casual visitant.

146. *Anas obscura*, Black Duck. Summer resident. A few breed here in April.

147. *Dafila acuta*, Pintail; Sprigtail. Not common.

148. *Mareca Americana*, American Widgeon; Baldpate. Casual visitant.

149. *Querquedula Carolinensis*, Green-winged Teal. Spring and autumn migrant.

150. *Querquedula discors*, Blue-winged Teal. Spring and autumn migrant.

151. *Spatula clypeata*, Shoveller. Rare visitant.

152. *Aix sponsa*, Wood Duck. Summer resident.

153. *Fuligula marila*, Greater Bluebill. Spring and autumn migrant.

154. *Fuligula affinis*, Lesser Bluebill. Spring and autumn migrant.

155. *Fuligula Americana*, Redhead. Spring and autumn migrant.

156. *Fuligula vallisneria*, Canvas-back. Shot at Lake St. Louis in the fall.

157. *Bucephala clangula*, Golden-eyed Duck. Spring and autumn migrant.

158. *Bucephala albeola*, Buffle-headed Duck. Spring and autumn.

159. *Mergus merganser*, Merganser. Common in spring and autumn.

160. *Mergus serrator*, Red-breasted Merganser. Spring and autumn migrant.

161. *Mergus cucullatus*, Hooded Merganser. Rare during spring and autumn.

LARIDÆ.—GULLS, TERNS, etc.

162. *Larus marinus*, Great Black-backed Gull. Rare during spring and autumn.

163. *Larus argentatus*, Herring Gull. Common Gull. Young birds occur during spring.

164. *Larus Philadelphia*, Bonapartes' Gull. Young birds occur in autumn.

165. *Sterna hirundo*, Common Tern. Spring and autumn visitant.

166. *Sterna supercilialis*, Least Tern. Rare spring and autumn visitant.

COLYMBIDÆ.—LOONS.

167. *Colymbus torquatus*, Great Northern Diver. Occurs in the St. Lawrence in spring.

PODICIPIDÆ.—GREBES.

168. *Podilymbus podiceps*, Pied-billed Grebe. Summer resident. Breeds here.

The above together with the interesting List of Birds, collected by Professor Macoun at Belleville, with notes by Professor Bell, of Albert University; published in "THE CANADIAN SPORTSMAN AND NATURALIST," in the November number of 1881, will, I trust, induce others to publish lists of birds occurring in their localities. Such records are valuable for reference, regarding the geographical range of the species.

Correspondence.

"CRACK" AND OTHER "SHOTS."

To the Editor of the CANADIAN SPORTSMAN AND NATURALIST:—

"It is generally the *mistaken* idea of those who are no judges of shooting, that if a man kills a certain number of times without missing, he is to be put down as a first-rate shot; and that another person, because he has been seen to miss, is to be considered as his inferior."—COL. HAWKER.

There is, no doubt, a large amount of charlatany in the pretensions of a *soi-disant* "crack shot," an illustration of which I may superadd to the cases alluded to in your last impression. I knew a gentleman, in England, who was said never to miss a shot; and he never, or "hardly ever," did. But then his *modus operandi* was as follows: he rarely pulled trigger on a bird at a greater distance than from 30 to 40 yards, and he scarcely ever even aimed at a bird that flew away to the right. I refer now to Partridge-shooting, and I need not say, that a very ordinary marksman ought seldom to miss a bird flying straight away from him, or to his left, at 30 yards. I knew another gentleman, a distinguished sportsman, who, although an excellent shot, *did*, and not unfrequently, fail to bag a bird he shot at; but, *his* style was somewhat different. He had a keeper always at his elbow with a *soco d* gun, and, having brought down his birds, right and left, with the first, the second, one of Lancaster's No 9, with steel barrels, was placed in his hands, and he *often* bagged a second brace, *generally* a third bird, from one covey. An excellent test of accuracy of aim may be demonstrated in the Old Country by paying a visit, in a boat, to the caves with which the rock-bound coast of Kerry, Ireland, is indented, and which are the haunts of seals, of many varieties of wild-fowl, and Rock-pigeons, *Columba livia*. Send a man in a spare boat into one of these caves, and the pigeons, called also Sea-pigeons, will fly out with meteor-like rapidity; and to drop them as they wing their way *towards you*, will put to the proof the accuracy of your eye and the

steadiness of your nerves. How different and how superior this sport to the almost mechanical process of firing at the same birds from a trap. *Aprpos* of trap-shooting, I once saw a number of school boys in a field, in England, some with guns in their hands, and some with baskets. I stopped to watch them, and found that they were about to engage in a pigeon-shooting match. A bird was trapped; the word was given; the trap was sprung; the pigeon was on the wing; a gun was discharged; and down came the bird, wounded, as I supposed, for it lay fluttering on the ground. To my astonishment, however, a boy ran up, seized the pigeon, and *trapped it again*. Explanation: the unhappy bird had a long slender string attached to its leg, and when it was not hit, it was *pulled down*, and submitted to another ordeal. Such is sport as some define the term! V. CLEMENTI.

Peterboro, February 20, 1882.

A BOY'S ENCOUNTER WITH A BEAR.

SIR,—The following true account of an adventure with a bear may be of interest to your readers. In August last, a boy about twelve years of age, living within seven miles from this place, started for the woods one morning in search of his father's cows. He had with him a shot-gun, and was accompanied by a dog; having entered the woods a short distance, the dog, which had hitherto kept close to his heels, bounded suddenly away and was soon lost to view. Thinking there was game ahead, he followed as fast as his short legs and the bushes would permit in the direction the dog had taken. On reaching a place where the undergrowth was thick and tangled, an animal rushed past him at a speed too great to enable him to see what it was; he then became alarmed and began to beat a retreat, and well he did so, for at this moment the ugly visage of a bear approached. Between fright, and a desire to get home, (just then,) the boy succeeded in reaching a more open space before Bruin caught up to him. He then turned around and as her ladyship raised to give him a fond embrace, the little fellow dashed the gun into her face, having forgotten in the excitement of the moment that it was loaded. This seemed to disconcert the bear a little, and the youth started to run in another direction, but was almost immediately pursued. Having to scramble over a large hemlock log, the bark gave way and he rolled over, being partly

covered with the debris. As he raised himself, Bruin stood above him, seeming quite surprised at his appearance; but, as he again started off, she gave chase, and had nearly overtaken him, when he took off his hat and threw it at her; this stayed her progress for a few seconds, and the boy took advantage of the delay by starting to climb a small ironwood tree, but none too soon: the first dash Bruin made for him as he was going up, left some ugly scratches on his boot. However he succeeded in reaching a limb about ten feet from the ground, over which he placed one leg. A short time afterwards, Bruin started up after him; and, although the tree was only about five inches in diameter, she succeeded in getting up beneath him. His free leg now came into use, and with all his force he kicked her on the nose and jaw; one unlucky aim, however, sent his foot into her mouth, but she only succeeded in tearing off a portion of the boot with which she descended to the ground, where she thoroughly examined her prize. After this, she proceeded to climb an adjacent tree, the trunk of which leaned in the direction of the one in which the boy was placed. She soon reached a point almost over his head, about twelve feet from him. Fearing she would drop down, he lowered himself to the ground, but was again obliged to ascend, as Bruin came down also. This operation was repeated several times, and it is uncertain how the adventure would have ended, had the boy not succeeded in attracting the attention of a man working in a clearing near by, whose arrival, with his dog, caused the bear to move away. On arriving home, the canine companion of the boy was found with the skin torn from one side of his face. The dog must have been the fleeing object that passed him just before he encountered the bear, and her persistency in following the boy, may be attributed to being enraged beforehand.

R. B. SCRIVEN.

Gravenhurst, Ont., 8th February, 1882.

THE PILEATED WOODPECKER.

In No. 12, Vol. I, you ask your readers for information regarding the nesting habits of (*Hylotomus pileatus*.) In reply to this query, let me say that the nesting habits of this species, differ little from those of the most common of the Woodpeckers; except that the

cavity which it forms for nesting, is of course larger, and generally in a large tree, deep in the woods and high off the ground. I have seen several trees which at different times contained the nest of this species, though I have not obtained the eggs. More than twenty years ago, when I was a boy, residing in the township of Peel, and while engaged in sugar making, I noticed a pair of these birds at the work of nest building, in the trunk of a large beech tree about fifty feet from the ground. This, was, I think, in the latter part of April. In May, the female was hatching, for when the tree was struck with a stick, she would dart out and shortly afterwards return to the nest. In June both birds were constantly seen going in and out of the nest, evidently attending to the wants of the young. While the female was incubating, the loud call of her mate might often be heard in the vicinity. Afterwards in the winter season when the tree was chopped down, I examined the cavity, and found it large enough to contain the body of a grouse. Among the early pioneers this bird was called the "Woodcock," and not until, in after years when I began to study the works of Ornithologists, did I know the true Woodcock to be a very different bird. This bird is the most retired and solitary in its habits of all the Woodpeckers; and, but for its loud, monotonous and exciting call, would scarcely be known to exist. This "outburst" is occasionally heard resounding through the dark pine and hemlock woods, while the feathered hermit is on the top of some lofty tree in the depths of the forest. The call is sometimes heard in mid-winter as well as in the summer season; but it is most frequently heard in early spring or late in the fall, and is by some supposed to indicate a change of weather. The favorite habitat of this bird is the high rolling, hardwood forests, where there is an intermingling of evergreens and the sound of rushing waters and though it may occasionally feed on seeds, fruit, &c., yet its chief food appears to be the larger species of insects and worms which it procures from the bark and trunks of decayed trees. When two of these birds meet—as they sometimes do—while in search of food, on the trunk of a large tree, especially an old hemlock or pine, they soon strip it of its bark and leave the giant of the forest a monument of their strength and industry.

NATURALIST.

Listowell, Ont., February 3, 1882.

A GENERAL DELUGE.

(Continued from page 104.)

The American continent bears unmistakable traces of a race who lived contemporaneous with those people. They, too, were mound, pyramid and artificial lake builders; they were sun-worshippers, as were those who reached Asia, and, like them had their idols, to whom they made animal and human sacrifices; they faced the east in their worship, and buried their dead looking the same direction, and each had a large array of priests who administered to their gods; each employed ornamented funeral urns in which they deposited the ashes of their worthy dead, and each used the phallic emblem in the same manner. In short, each were parts of the great wave of humanity, going out of a common centre, one rolling eastward, the other westward, to escape a then impending calamity. Each had similar features† and similar forms of expression; each carried forward a similar civilization; each had made similar advances in mineralogy; each employed the now lost art of hardening copper for stone-cutting, and used the precious metals for ornamentation. And, to climax the whole, *each had a written language.*‡ *Famine, pestilence, and exterminating war, an overwhelming ocean wave, or some other direful calamity swept all away. His labors only remain to tell that he has been. Savage man, from some*

†In an excavation made in the lower stage, or esplanade of the principal mound, I found embedded in the walls of the cut, and so firmly fixed in the wall that it was with difficulty extracted, *the head of an idol with Asiatic features.* * * *It would be of thrilling interest to be able to ascertain how the conception of the Asiatic face originated.*—S. B. Evans in his letter of May 25th, 1881; to the *Chicago Times*, describing his visit to the pyramid of Cholula, Mexico.

‡Their monuments indicate that they had entered upon a career of civilization; they lived in stationary communities, cultivating the soil and relying on its generous yield for support; they clothed themselves, in part at least, in garments regularly spun and woven; they modeled clay and carved stone, even of the most obdurate characters, into images representing animate objects, including even the human face and form, with a close adherence to nature; they mined and cast copper in a variety of useful forms; they quarried mica, steatite, chert and the novaculite slates, which they wrought into articles adapted to personal adornment, to domestic use, or to the chase; they collected brine of the salines into earthen vessels, moulded in baskets which they evaporated into a form which admitted of transportation; they erected an elaborate line of defence stretching for many hundred miles, to guard against the sudden irruption of enemies; they had a national religion, in which the elements were the objects of supreme adoration; temples were erected upon the platform mounds, and watch-fires lighted upon the highest summits; and in the celebration of the mysteries of their faith, human sacrifices were probably offered.—*Foster's Pre-Historic Races of the United States*, pp. 350 and 351.

(To be continued.)

less favored region, gained control, and *intruded* his dead into the mounds and places of sepulchre of the lost, and now, so far as America is concerned, wholly extinct race.

The antiquarian and scientist, and the theologian as well, should cease investigations among the ruins of Asia for the birthplace of humanity, but such may, with profit, find a perfect resemblance between ancient Asiatic and American civilizations, and almost demonstrate that the latter is coeval with or antedates the former by thousands of years; that the western is quite as old as the eastern hemisphere, and that here has been wrought changes of which the human mind has but a feeble conception; that the marks of an ancient and advanced civilization all around us give indications of still older ones which cycles of submergence and emergence are ever developing to observing man; and which, if human records could be preserved through all the mutations of time, would ultimately reveal much that at present is concealed from the earnest investigator.

In a preceding article we stated that even scientists, had claimed too brief a period for the age of the earth. A hundred thousand years leave but trifling changes on the earth's surface, when the vast whole is taken into account. A portion of a continent may be engulfed and another may emerge from the ocean; new islands may appear, or seas be drained, but the general appearance will remain the same. The changes are not so marked or frequent now as during earlier periods, when the internal heat was greater, the surface thinner, and the shock was more universal.

Geologists, as if fearful that a statement of the long period which has elapsed since the earth was a molten incandescent mass, revolving on its own axis, as well as round the sun, carrying with it several satellites, all of which, save the moon, have been completely swallowed up and lost in the parent earth, are content to demonstrate the thousands of years which would be required to silt up the valley of the Nile; to show how vast a period would be required for the Ohio, Mississippi and Missouri, and the tributaries, to fill up an arm of the ocean from Cairo to the Gulf of Mexico; to abrade the rock of Niagara and form the mighty chasm, more than two hundred feet in depth, and seven miles in length, through which flow the waters of the great lakes on their way to the ocean; or to build up a chalk cliff nearly a mile in height, as found in England, from minute shells of microscopic animalculæ.


THE CANADIAN SPORTSMAN AND NATURALIST.

No. 4.

MONTREAL, APRIL, 1882.

VOL. II.

WILLIAM COUPER, Editor.

 IN ORDER to dispose of an accumulation of matter, we have increased the number of pages in our present number. This enlargement we would like to retain permanently, and trust that before the end of the present volume, our subscription list will have increased to such an extent as to enable us to do this without suffering pecuniary loss. We have had many difficulties to contend with—much doubt expressed with regard to our longevity—and some fault found with the limited form of our publication. These difficulties have not proved insurmountable. Our subscription list has steadily increased. We have endeavoured to profit from the well-meant criticisms of our friends, and have quietly ignored the forebodings of those who did not predict our success. We now ask the co-operation of our subscribers—of all lovers of field sports and Natural History—and with this assistance, in a country so extended as the Dominion of Canada, and in which there is such a diversity and abundance of sport, we feel quite confident of the prosperity of the CANADIAN SPORTSMAN AND NATURALIST, which we claim is the only publication in the Dominion, devoted exclusively to legitimate field sports and the Study of Nature.

WHY ARE GAME ANIMALS BECOMING SCARCE ?

When Bartram, Audubon, Bachman, Wilson and Bonaparte wrote on American Natural History, the quadrupeds and birds which are classed as game on this continent, were then abundant. The above writers had no difficulty in obtaining material to describe and illustrate their works. But a gradual change has been going on as regards the abodes of American animals. Man, in opening up the soil, destroys

or presses back almost every wild animal inhabiting his immediate woodlands and lakes. The aborigenes are no exception, as many of us now living, can remember. In 1842, Indians were settled on the North shore of Lake Ontario; one tribe called "Credit Indians," were frequently seen at that time selling their wares in the streets of Toronto. Their stay was of short duration in the neighbourhood of whiskey and the white man—being compelled to seek another *habitat*, they gradually disappeared—the weaker *homo* had to succumb to the stronger. In like manner, combined with the achievement in the forms and use of heavy arms of late there is also a visible force pressing on the wild animals from their former haunts in prairie and forest, and in order that they may retain their balance amongst the native *fauna*, they, like the weak aboriginal tribes, have also to retreat to new localities to find a subsistence. In 1842, many of the large Canadian marshes were teeming with geese, duck, snipe and plover indigenous to the country. Toronto marsh was then a good shooting ground, and many birds which regularly visited it at that time, are considered of rare occurrence to-day. A large Black Bass (*Huro vulpes*, Agassiz,) then had its *habitat* in Ashbridge's Bay, and many a fine 20lb. fish of this species did Joe Lang spear in its surrounding marshes. But there has been a change; the building of the esplanade forced back the water in Toronto Bay, resulting in a breach in the sandy peninsula opposite, therefore destroying the old marshy grounds lying east of the city, thus finishing the historical hunting and fishing resorts of Toronto sportsmen. An increasing rural population annually clearing the woodlands, and the extension of railroads are powerful agencies to frighten and cause the removal of wild animals, which, at

one time, were common in our immediate forests. The Moose and Virginia Deer will not remain long in proximity to civilization, and it is a fact that these species each successive season move towards higher latitudes. It is therefore probable that ere many years pass away, the hunter, in order to obtain venison, will have to travel to the extreme northern edge of the Canadian forests to find his game. There is an American cry at present against a few English gentlemen, who occasionally visit the Western regions of the United States in search of large game. They are accused of wantonly destroying Rocky Mountain Elk (?) Shooting the animals down for the mere pleasure of afterwards boasting of the circumstances. Now, we cannot comprehend the reason why an old sporting paper like *Forest and Stream*, should mislead its readers by stating that Englishmen journey so far for the sport of shooting Elk, when they can procure them in some places in Canada or Maine. An editorial in the same paper says that Moose are not abundant in the Rocky Mountains or valleys adjacent thereto. There is something wrong here, and the zoological writer in *Forest and Stream* would do well hereafter to adhere more closely to the nomenclature of the Michigan Sportsmens' Association. No true sportsman, especially an English one of means, will remain silent without demurring against a false charge of this nature, and it is evident that the object of making it, is to further the interests of Western skin hunters, who are jealous of the visits of good marksmen, who go there, not for mercenary purposes, but for pure sport. The people inhabiting the Western portions of the United States, where large game occur, should certainly make stringent laws to protect the animals, going so far as to compel every man to procure a license to hunt in the regions of the Rocky Mountains. If this is not done, the Wapiti (*C. Canadensis*), the Elk of *Forest and Stream*, will ultimately be exterminated, and the Buffalo (although not considered game) ere many years pass

away, will also be classed among extinct quadrupeds of this continent. In our own Great North-west Territories, at present, the richest sporting grounds in America, the advance of the white man will eventually produce the same changes in the *fauna* of that region which have been alluded to above. The lakes and ponds of the vast prairie lands for centuries past and the breeding-places of many species of wild water fowl, will, as man surrounds them with his habitations, be thoroughly deserted, and the birds, like the poor Indians, must find more retired places to produce their species. Such then is the Natural History view to be taken of the advance of civilization westward. Every animal of a wild nature will have to retire before it. That there is plenty of space for their removal, there is no doubt, but there is a limit to the northward progress of some quadrupeds and birds, many species of which cannot subsist in high latitudes. Then, anticipating a large annual increase to the present rural population in the North-western portions of Canada, the results which are now spoken of regarding a change in the *fauna* of that region, will certainly take place. Where will they go to be undisturbed as they were before the recent encroachment of man on their domain? This is a question of interest to the sportsman and naturalist. Any person reading Audubon's visit to Labrador, and who will take the trouble to follow his footsteps on the latter coast, as the writer has done, may see the changes which have taken place there. In fact, one reading his description on the spot where he found a species of bird breeding on that rocky shore, would pronounce the statements fictitious, as no nests of the kind are found there at this day. Man appeared and settled in the neighbourhood, and the birds have removed for safety to more secluded places.—C.

THE NIDIFICATION OF NUTHATCHES.

Eminent Ornithologists have described the nesting habits of these birds as similar to Woodpeckers, the nest being formed by

excavating a hole in a decayed tree or stump. Audubon mentions having found in Maine, a nest of *Sitta Canadensis*, which was dug in the decayed wood to the depth of fourteen inches. Coues, in his "Birds of the Colorado Valley," referring to *Sitta Carolinensis*, states, "that it regularly digs a hole for itself, both sexes working assiduously till an excavation, it may be fifteen or twenty inches deep, is prepared for the reception of the nest." The European Nuthatch appears to nest differently, according to Morris "the nest is placed in some hole in a tree. If the entrance is too large, they narrow it with clay, until it is of the right width." Now, if all these descriptions are correct, we find a wide difference in the nesting habits of our Nuthatches and their European congener.

My observations have, so far, been confined to *Sitta Carolinensis*, three nests of which I have taken during the past five years, none of which were in holes formed by these birds, but in natural cavities, in living trees. From these observations I would suppose a natural cavity, or the deserted nest of some woodpecker, or squirrel to be the place usually selected, and that these birds never, or "hardly ever," dig a hole for themselves. The following extract from my note-book refers to the last nest taken.

Returning from a visit to a sugar camp in the spring of 1878, I heard the cry of a pair of Nuthatches, following in the direction of the sound, I soon perceived the birds and was not surprised, even at this early season, to find that they were making preparations to build. One of the birds had in its mouth a large piece of downy looking material, with which, after a short time, it flew to a neighbouring tree and proceeded to the spot selected for the nest. This was a round knot hole, overgrown by bark, and about four feet from the ground. I ventured to peep in, but all was darkness within, and as I did not wish to disturb the birds, retired, to observe them from a distance. For several days both male and female were busy carrying material for the nest, after which I did not see them for some time, as after completing the nest they apparently retired to some secluded spot, no doubt to complete their nuptial arrangements. On the 20th April, with mallet and chisel in hand, I again went to the tree and on looking down into the cavity could see the female on the nest. The hole, though sufficiently large to admit a bird of greater size than the Nuthatch, was too small to allow me to insert my hand. Before pro-

ceeding to enlarge it, I knocked vigorously on the tree but could not frighten the brave little bird away. I then took a slender stick which I thrust gently into the hole and endeavored to force her to leave by touching the head and wings. This, she resented by pecking angrily at the twig and I was at last obliged to allow her to remain while I enlarged the cavity. The nest I found to be composed of a large amount of miscellaneous matter, rabbit hair predominating. The material was spread over a large surface in the cavity, with a well defined depression in the centre, which contained the eggs, nine in number. Incubation had not commenced and I transferred them to my cabinet without accident. This was the largest set I obtained, the other two nests having contained six and eight respectively.

W. W. DUNLOP.

Montreal, March 10th, 1882.

MONTREAL BRANCH, ENTOMOLOGICAL SOCIETY OF ONTARIO.

The eighty-ninth meeting of this society was held on the 13th March, at the residence of the President, H. H. Lyman, Esq., who read a paper on the Lepidoptera collected at Sault St. Marie, in 1881, by Dr. Robert Bell, of the Geological Survey. All the species taken are also found at Montreal, with the exception of *Coenonympha inornata*, Edw., a butterfly taken in the Western States, but which extends into the Algoma region of Canada. A pleasant hour was spent over the microscope, and several rare and beautifully illustrated works on Entomology were also on the table for the inspection of the members.

REPLY TO ORNITHOLOGICAL QUERIES.

SIR,—In your March Number it is queried if the nest of the Whip-poor-will (*Antrostomus vociferus*) has been found in latitude 45°. The latitude of Listowel is nearly 44°, but owing to its elevation, is probably as cold as 45° of the sea level. The Whip-poor-will is quite common in the swampy woods of this neighbourhood, and during the calm hours that follow the sunset of the early summer evenings, its loud and melancholy notes may be heard in the town, from the woods north and south, though nearly a mile distant. Its eggs have been found by several parties in the vicinity, and one collector who procured some and appeared well acquainted with its habits, informed me that its nest is always sure to be found near the place where its notes are heard

in the early part of the season. Two years ago, a boy who resides a few miles south of this town, told me that the summer before, he had found the eggs of this bird on the bare ground, where a log had been removed, in a piece of swampy land. In 1865, when I came to reside in North Wallace, a neighbour found a nest of the Whip-poor-will, containing two eggs, in the month of August; this seems to indicate that it hatches more than once in the season, as it is well known that the eggs are generally found in the early part of June. The latter nest was on a piece of rising ground close by a pine and cedar swamp, and the eggs were of a bluish white color mottled with brownish black. The peculiar notes of this bird are probably the voice of the male, and its noisy repetition is generally heard at the time when the female is selecting her nesting place, and during incubation. After the young are hatched, the time and attention of the male is occupied in assisting to supply their wants, and his twilight notes gradually cease as the young become more voracious, until about the middle of July, when he becomes silent, except when the first eggs have been removed and his mate is again nesting. It makes no regular nest; the two eggs are deposited on some dry leaves, or fine rotten wood, near swampy woods, where amid the dense foliage, and gloomy shade, perched *lengthwise* on a low branch, or mossy log, the male passes the hours of sunlight in silence and inactivity, but as the shadows of evening gather over the woodlands, it commences its low, soft flight in pursuit of night-flying insects, or in some dark retreat, "begins its evening hymn." *The Winter Wren*—A query regarding the nest of this bird, is also made. I do not know it by that name, but there is a Wren quite common in the wild swampy woods of Central Ontario, whose thrilling notes are very pleasant, especially when heard in the early spring mornings, before the snow and ice have disappeared from the gloomy places, where the little creature takes up its summer residence. Its general appearance is similar to that of the House Wren, but it is rather smaller and darker in color. It sometimes utters notes like the red squirrel, and again like the chirp of the cricket, but louder. It forms a nest like that of a mouse, generally in the under part of the turned up root of a fallen tree, sometimes in the side of an old moss-covered log, or rather stump; the outside is formed of moss, and the inside is lined with fine dry grass, feathers, and hair. Its eggs are white with reddish spots scattered over the

large end. It sometimes lays eight eggs. Those in my collection were taken from a nest of six in the early part of June 1879. *Sitta Canadensis* is rather a *rara avis* in those districts where my ornithological researches have been pursued. It appears to prefer the deep evergreen woods to the hardwood timber lands. I have not seen its nest or eggs, but am informed that they differ little from those of the white-bellied species. I have often seen the nest and eggs of the latter and can furnish a sketch if desired. *Parus Hudsonicus* does not visit this latitude, and the Pine Grosbeak is only a rare winter visitor. Of owls I have not seen a nest or egg of any of the species, some of them, however frequent our woods, and doubtless nest here. Mr. Vennor's article on the nest of the Sparrow Owl, is the only article on the subject that I have ever seen. It is a very rare bird here. The Woodpeckers mentioned do no visit this region. The nest of a Crossbill, containing young, has been seen in a neighbouring township, in the month of March, and another species, the Shore Lark also nests in March and April.

WM. L. KELLS.

Listowel, Ont., March 15th, 1882.

Pine Grosbeak (*P. Canadensis*). I collected an adult female in the immediate vicinity of this city, about the beginning of August, 1879; this was the only one I have observed during summer. Mr. J. H. Carnall informs me that he found them quite abundant in September, on Nictaux mountain, Tobique river; he also found several old nests, which he assures me were made by these birds. Some years they are abundant, then, for two or three successive winters, we see nothing of them. During the winters of 1876 and 1878 they were very abundant, visiting the suburbs of the city, feeding on the berries of the mountain ash. Can you give a reason for the peculiar movements of this bird? Hudson Bay Tit, (*Parus Hudsonicus*). This Titmouse is undoubtedly a resident with us, and breeds in this Province. I collected a specimen on the 20th of May, and have observed them here during summer. Mr. Banks noticed a pair in June, carrying material for nest-building. Two nests of this species were discovered near Stewiacke, N.S., by Mr. Bailey of the Nuttall Ornithological Club. Red-bellied Nuthatch, (*Sitta Canadensis*). Have found this bird nesting near St. John. They are more abundant some seasons than others.

HAROLD GILBERT.

St. John, N.B., March 13, 1882.

NOTE.—These queries are going to do good eventually. In their promulgation, I wished to arrive at truth in order to correct the errors of old American writers on our birds, more especially regarding the time and localities of nidification of the species which pass the greater portion of their lives in high latitudes. Our correspondent gives no substantial proof that the Pine Grosbeak breeds in N. Brunswick. Until the nest and eggs are discovered, the mere occurrence of one adult female in August will not suffice to class it as a resident. They arrive about the latitude of Montreal during severe weather in September, being then gregarious, remaining as such in the woodlands until the middle of May following, when they leave for the far north. Regarding the nests spoken of by Mr. Carnall, it would be worth his while to visit the locality again during the breeding season. Will Mr. Gilbert be kind enough to send a description of the nest of the Red-bellied Nuthatch? Does it select an old knot-hole or excavate a cavity for itself?—C.

ACCLIMATING THE MESSINA QUAIL AT QUEBEC.

DEAR SIR.—In one of your recent issues you alluded to the efforts of Col. W. Rhodes, and others to acclimatize the Messina Quail in this Province. The Colonel is now in Europe and has, if I mistake not, sent orders for the importation of a few hundred of these birds. In order to help his praiseworthy efforts, I permitted him to send to my aviary of Canadian birds, the Quail he received too late for distribution in the woods last year. I intend to give them their liberty in April, and from the following statements, I hope success will crown the Colonel's efforts.

Yours truly,

J. M. LEMOINE.

Spencer Grange, }
Quebec, 20 March. }

W. Rhodes, Esq., Quebec, P.Q., Canada.

DEAR SIR,—Your favor of 13th January came duly to hand and much interests me. I did not see your referred notice to queries in

"Forest and Stream," or I might sooner have given you the gratifying news that the quail returned to Maine last spring. None were imported to this State in 1881, and they were observed here previous to the liberation elsewhere of any newly-imported ones. The young of the previous season were hatched in June and July. They mature very rapidly, and from the time of hatching (when they at once leave the nest as good runners) until the autumn migration, there is an interval quite equal to the time afforded the young of as many of our song birds to acquire strength for their long journey. By my advice and direction the 2,000 quail that I distributed throughout Maine, in 1880, were liberated in lots of not less than 15 or 20 in each locality selected. If this method with equal total numbers should be followed up for several consecutive years, I should have no doubt of success in the object desired. The results of a single season, however, may not prove to be permanent.

Yours very truly,

EVERETT SMITH.

Portland, Maine, Jan. 20th, 1882.

NOTES ON THE NATURAL HISTORY OF LUCKNOW, ONT.

SIR,—You published a list of reptilia procured by me in this vicinity, and other localities in Ontario. The following four additional species, have been added to my collection *Chorophyllus triseriatus*, Little Tree-frog, Lucknow. *Amyda mutica*, (four specimens.) Lake St. Clair. *Amblystoma Jeffersoni*, Jefferson's Salamander. Found at Hyde Park, by J. Morden. *Scotophis, Allighanensis* is reported to be found in Essex; its occurrence here is probable, as I have received several specimens from Michigan, which is in the same latitude, the only barrier being a river, separating the Southern portion of Ontario from Michigan.

The Red Lynx, *Lynx rufus* is not uncommon in this neighbourhood. I obtained four specimens this year, and I can procure more if I take the trouble to hunt for them. The Canada Lynx, *Lynx Canadensis*, appear to be a larger Northern species. It has never been seen on this peninsula, or south of the Ottawa river. I have read of it as occurring common in the Province of Quebec. Almost every school-boy has read the interesting account of Mr. Bannetyne in the "Reader;" of how an

Indian was killed by a Canada Lynx, and his brother's description of his death and removal for burial. Among birds, I record the capture of the Sandhill Crane, *Grus Canadensis*, shot by Mr. F. Martin on St. Clair flats. I obtained it from him. He killed another which unfortunately flew into an unapproachable morass and was lost. I accompanied him on the next day to hunt for it; the mud was deep and we could not find bottom with an eight foot paddle. The surface was covered with rank weeds and other vegetable refuse, preventing us from pushing the canoe into it or over it, and to attempt walking on it would be a mad idea. I shot the King Rail (*Rallus elegans*), and had it mounted; also a Yellow Rail (*Porzana Novaboracensis*). I presented these two birds to Mr. John Morden of Hyde Park. A very fine specimen of *Rallus Virginianus* shot on the flats may be seen at any time among his beautiful collection of Canadian birds. Among rare ducks, I secured two fine specimens of the American Black Scoter (*Aedemia Americana*); also the Velvet Scoter (*Aedemia fusca*); they are magnificent birds. I killed some splendid Canvas-back which I prize highly, as they are becoming scarce, but I am sorry to add that I lost a fine young specimen of the Red-necked Grebe, (*Podiceps Holboellii*), which by the carelessness of the Express Co., was not delivered until spoiled. I particularly regret this, as I have only procured one specimen during many years. The Great Northern Diver, (*Colymbus torquatus*), is common but difficult to obtain. I am not aware that *Colymbus Arcticus* has been noticed on the inland lakes, but I have shot three or four of the Red-throated Diver, (*C. Septentrionalis*). I have also seen the great White Heron, and one was killed near Wallaceburgh Co. Kent, but the ignorant person who shot it, allowed the bird to spoil. The Least Bittern, (*Ardetta exilis*) and Night Heron, (*Nycticorax grisea*), are not uncommon on the St. Claire flats.

J. H. GARNIER.

Lucknow, 27th Feb., 1882.

EXPERIMENTS WITH GUNPOWDER.

SIR,—I send you a report of some experiments I have been trying with the following powders, thinking it might be of interest to some of your readers. I have been unable to carry out the trial of the different kinds of powder I mentioned to you some time ago,

owing to the difficulty I have in obtaining it in such small quantities (viz.: 12 charges of 3 drams each.)

Description of Powder.	Wadding.		Pattern 10 in. Plate.	Force per Pellet.	Velocity. Feet per Sec.	Recoil. 89 lbs.
	Over Powder. {Thin Card} {Thick Felt} {Thin Card}	Shot Thin Card				
Pigou, Wilks & Laurence No. 4 Grain	do.	do.	21	2.66	617	89 lbs.
Curtis & Harvey's	do.	do.	34	2.40	556	79
No. 6 Diamond Grain	do.	do.	26	2.39	554	88
Hamilton F.F.	do.	do.	34	2.30	533	83
Hamilton "Caribou"	do.	do.	24	2.53	586	87
Shultze	do.	do.				

CHARGE OF POWDER 2½ DRAMS AND 1 Oz. No. 6 SHOT. (Same Distance.)						
4 Pink Edge.	Thin Card.					
Pigou, Wilks & Laurence	do.	40	2.78	644	91	
Curtis & Harvey	do.	25	2.03	470	83	
Hamilton F.F.	do.	30	2.71	628	81	
" "Caribou"	do.	15	1.86	431	73	
Shultze	do.	40	2.41	566	87	

I may state the recoil spring was screwed up to 60 pounds.

The fine grain powder (Pigou, Wilks & Laurence's and Hamilton F.F.) did best with the 2½ dram charge, both in pattern and pellet force. Shultze's powder also gave the best pattern, but the force was not quite so good; the recoil being the same as with 3 drams of Curtis & Harvey's, and "Caribou" fell off very much, although the recoil of the former was four pounds heavier and the latter ten pounds lower. The heavy recoil with the 2½ dram charge was probably caused by the

change of wadding, the four pink edge offering more inertial resistance than the thin card and thick felt.

TABLE SHOWING HIGHEST AND LOWEST PATTERN, VELOCITY AND RECOIL.

Charge 2½ Drums.

	Pattern 10"		Velocity.		Recoil.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
Schultze.....	55	35	6'09	501	90	86
Curtis & Harvey..	30	20	5'03	412	85	81
Hamilton F.F....	40	20	7'30	528	85	80
Do. "Caribou"	20	10	4'64	412	75	71
Pigou, W. & L...	65	20	7'40	545	96	86

Charge 3 Drums.

Schultze.....	34	17	5'93	577	90	86
Curtis & Harvey..	37	29	5'89	501	90	72
Hamilton F.F....	23	20	5'59	547	91	84
Do. "Caribou"	42	28	5'40	519	85	81
Pigou, W. & L...	35	15	6'38	589	93	84

AVERAGE OF THE DIFFERENT POWDERS.

Charge 2½ Drums.

	10 in. Pellet		Force.	Velocity.	Recoil.
	Pattern.	Shot.			
Eng. Black Powders..	33	2.41	559	84	
Hamilton do.....	23	2.26	524	77	
Schultze	40	2.44	566	86	

Charge 3 Drums.

Eng. Black Powders..	28	2.53	586	78
Hamilton do.....	30	2.35	545	83
Schultze.....	24	2.53	586	86

Schultze Powder recoiled nearly as much with these charges as it did when fired with 52 grains and 1½ oz. of shot, in which case it averaged 88 pounds.

SPREAD OF SHOT AT DIFFERENT RANGES, (1 oz. of Shot used.)

Distance	5, 10, 20,		30 and		40 Yards.	
	Charge	Diameter of Pattern in Inches.	Ver- tical.	Horiz- ontal.	Ver- tical.	Horiz- ontal.
3 drams.	4	6½ 17	43	and 40½	79	and 70
3½ "	3	6 15½	40	" 38	74	" 69
3¾ "	4½	9 24	52	" 51	90	" 87

Circles with the above diameters do not include all the pellets in a charge, as there were a few wild shot that I did not include, as anything outside would only be struck by the merest chance. According to the spread of shot they do not travel in a straight line after leaving the muzzle, but curve outwards from the "line of fire. At first I thought this was caused by the shot passing through the paper screens, so I tried a shot at the 40 yard screen only and obtained about the same result; therefore I am satisfied the screens did not affect the direction, and conclude it is caused by the shot colliding with each other during their flight. The horizontal diameters of the 30 and 40 yard pattern, were shorter than the vertical in every case, varying with the charge

of powder, the heaviest charge giving the least difference. I measured and weighed the different powders, and find that Curtis & Harvey's is the heaviest for its bulk, "Caribou" the next, the other two samples are the same weight, and Schultze powder was rather under half the weight. The charges of "Caribou" used in these experiments, were obtained from a friend, who purchased the powder as such.

Yours truly,

Lachine. 12-BORE GREENER.

A DEER HUNT IN FLORIDA.

DEAR SIR,—Thinking perhaps some of the readers of your journal, would like to know what kind of sport we have on the West Coast of Florida, I will try to give them an idea of what is to be had in the way of shooting. I shall tell them of what I saw in a day's deer hunting on one of the Islands of Charlotte Harbor. Leaving this place about ten a.m., a party of five of us, exclusive of "Bob" a very intelligent hound, proceeded across San Carlos bay; two going in a small schooner, and three of us going in a sloop; after a pleasant run of about an hour, we passed between Sanibel and Pine Islands, entering that beautiful sheet of water named "Charlotte Harbor." Before us lay a number of islands of a semi-tropical appearance. The palmettoes and hemp raising their heads high above the mangroves; between the islands were oyster bars which were covered with White and Grey Pelicans, Cormorants, and Great Snowy Herons. On the neighbouring mangroves, perched Ibises, the Scarlet necked and Louisiana Herons, and the beautiful Roseate Spoonbill, while farther up the harbor we could see the white sails of a schooner beating up towards the north. Sailing along the shore of Pine Island, we dropped anchor close to a small island near Pine. Leaving H— in charge of the boats, we took our small boat and rowed to an oyster bar between the two islands, where K. and I landed, and concealed ourselves behind a low growing mangrove. C—, S—, and the dog then went to the small island to drive it. We expected the deer, if any were there, would take to the water, and swimming to the bar, cross it, and endeavor to escape to Pine Island. We had not very long to wait till Bob gave tongue. K— and I crouched lower among the leaves and anxiously watched the opposite mangroves, but Bob drove away from us, and then suddenly changing his note, we knew he had TREED. "Well, by George, I'll bet that's a Coon" said

K—, at that moment we heard two reports from a gun, then all was silent. We waited a few minutes longer, when Bob again spoke. He made the circuit of the island several times and then once more all was quiet. K— and I sat and watched the sharks pursuing the mullet. I counted seven sharks from five to ten feet long, all within a hundred yards of us; or we watched the interesting movements of a large Bald Eagle and an Osprey. The latter had captured a mullet, when the Eagle, which had waited patiently on a large mangrove near by for this event, immediately swooped down towards the Osprey, which uttering screams of despair, endeavored to rise above the Eagle. This, the last named bird tried to prevent. I never saw anything more beautiful than the flight of those two birds. The Osprey would rise quickly, then drop, but the Eagle was always close behind, and throwing itself down with a half somersault movement, would try to seize hold of the fish. When this had gone on for some time, a second Eagle appeared on the scene and took up the pursuit, upon which the first withdrew from the chase and returned to his perch. The Osprey now evidently despaired of escaping with its prey as the second Eagle which appeared to be a female, and was probably the mate of the other, pursued it so closely, it was forced to drop the fish, when the Eagle pausing for a moment in the air, went down with a rush and caught the fish before it fell in the water. In watching the Eagles we had almost forgotten the Deer, but Bob had not, for we could hear him approaching quite rapidly. We also heard C— and S— shoot once or twice. In a few minutes a deer jumped into the water from out the mangroves to be quickly followed by another, and close at their heels was Bob. On they came swimming rapidly towards us, nothing but their heads being above water. When they came within good range I gave the first the contents of my gun, turning it over, while K— fired at the second only wounding it however, and though we gave it another charge of buckshot, it swam around the end of the bar and escaped to Pine Island. We got the dog into the boat and going over tracked it for some distance into a mangrove swamp, but as the tide was rising, Bob lost the trail and we had to return without it much to our disappointment. Returning to the bar we took the Deer we had secured to the boats where we cut it up. As the sun was now getting down towards the horizon, the various kinds of birds began to seek their roosts or rookery,

as it is called. I stood there and saw flock after flock of Ibises, Pelicans Herons, Egrets, Spanish Curlews, Cormorants, etc. pass by, while the rookery was alive with them. High over all sailed the graceful man of war Hawks describing circle after circle with a scarcely perceptible motion of the wing. Having had something to eat, C— and I started for home, the others in the schooner going up the harbor in search of Flamingoes. We had a pleasant sail home and altogether enjoyed our hunt very much. I may mention that it was a "Coon" Bob had treed the first time, and our friends had to discharge their guns to frighten the Deer off the island, as they were not at all afraid of the dog. C— and S— could not get a shot at them as the mangroves were so dense.

Yours &c.,
F—.

Punta Russa, Florida.

A GENERAL DELUGE.

BY G. W. BROWN, M.D., ROCKFORD, ILL.

(Concluded.)

But they neglect to tell of those illimitable ages, which it enumerated, no one could comprehend, probably not less than six hundred million years, during which every particle of matter, whether dust, or clay, salt, sand, pebble, boulder or rock, mineral or vegetable, found on the earth, or deep below its surface, of which the various geological formations are composed, whether stratified or otherwise, overlying the primary rock, more than twenty miles in depth, and in which the fossil remains of by-gone ages are entombed, have been wrested and torn from the elementary rock, worn down by rolling upon each other, and by the action of winds and waves and falling waters, has subsequently been deposited in the beds of oceans, to again harden into rock, giving us the sandstone and limestone formations, the coals, shales, clays and all other rocks and earths, other than the quartz—the parent of them all.

The mind is overwhelmed as it contemplates the eternity of years which have preceded us, as the eternity which lies beyond! Truly it may well be said: "We stand midway between two eternities!"

Puny man may seek to abridge the years, and shorten the geological ages; but the startling fact is ever before him that finite mind is incapable of fathoming infinity. He must become conscious that *change*, not *destruction*,

is the fate of everything; that Law, fixed and eternal, governs the minutest particles of matter as of rolling worlds.

Man lives his brief life, passes away and is succeeded by others. Another generation repeats itself. So it has always been—so it will ever be. There really was no beginning, there can be no ending.

We may render homage to a master mind who designed all, and called all into being, or insist that all is self-existent and eternal, and we shall find the result is the same. It saves one step in the grand scale of creation. The ancients thought the earth was a plane, and rested on pillars; that the pillars rested on a rock, and the rock on a turtle's back. But what does the turtle rest upon? was the inquiry of the sceptic.

The logic that there is no design without a designer, no law without a lawgiver, is only a repetition of the pillar, rock, and turtle theory as regards the earth.

The sceptic of to-day meets all our arguments in regard to a first cause with the syllogism: "All the works of the Creator give evidence of design. As no design can exist without a designer, therefore," say they, "the Creator must have had a designer." Astronomers found that the earth did not rest upon pillars; that there was no need of a rock for them to stand upon; nor a turtle's back to support the rock; so when humanity shall better understand the forces of Nature, self-inherent in matter, which calls world's into being and endows them with motion and life, there will be less need for trying to comprehend that which is incomprehensible. The Law governing the mighty machinery of the universe; which keeps all in equal poise; which causes the earthquake and the upheaval of vast mountain chains; which drains oceans and sinks continents; which fills the atmosphere with lurid flame; and startles the people with its thunder crash; which gives rise to the winds, the waves and the tides, the heat of summer, the cold of winter, and the thousands of other incidents of well defined Law, once ascribed to the action of an *angry* God, is now well understood. As knowledge is further developed, other secrets of nature will be revealed, and the mythical causes will be further and further removed into the realms of the ignorant past.

The genuine student has no theories predicated upon early teachings. The great book of Nature is wide open before him, penciled by unerring Law, and everything must be tested

in the great crucibles of Reason and Truth. The dross is only consumed. The pure gold is made brighter by every test applied to determine its genuineness.

The Sanscrit is probably the original of all modern European languages. It contains the roots of the Latin, Greek, Celtic, German, and Slavonic. It is the ancient tongue, which prevailed throughout Hindostan, and from the Gulf of Bengal to the Arabian sea, extending to the Himalaya mountains on the north. The language has not been spoken for many thousand years. The sacred books of the Brahmins were written in it, and, hence, have been preserved to modern times, without alterations common to a living language, as our ancient literature has been transmitted to us through the Greek and Latin. Scholars find the original of many of our myths in the Sanscrit, the story of "William Tell" being one of them, though the scene of it is now located in Switzerland, and the occurrence is made to have transpired within a few hundred years.

We stated in a former article that the account of a general deluge was undoubtedly copied by Jewish historians—priests, Josephus tells us,—from Babylonian records, while the Israelites were captives in that country. The Babylonian history, without question, was the source from which the flood of Deucalion, as well as that of Noah, was derived; but the story was older than Nineveh or Babylon; it was transmitted to them from a still older civilization; it came to those ancient people through the Sanscrit literature, the common fountain from which Chaldea, Assyria, Persia, and Egypt, were supplied, and from which the Phœnicians drank second hand, as did the Hebrews.

The geography of the old Sanscrit books describes the world as "a circular plain, with a slightly convex surface, sloping gently on all sides to a surrounding ocean. Beyond this ocean, which incloses the world in a vast river-like circle of waters, was a circular range of mountains, beyond which none but the most powerful gods could pass. In the centre of the world, at the highest point of its surface, stood Mount Meru, with Jambu-dwipa, the primeval home of the Aryan race, spread out around it," bordered by six other grand divisions of the earth.

These mountains bordering the ancient ocean supported the vast vault which spanned the heavens. Above this vault was the home of the superior gods. From their hand direct

came light, and heat, and dews, and rains, and all other blessings; and, when the gods were angry, winds, and storms, thunderbolts and earthquakes. The sun and stars were made expressly for man, as were the seasons, with seed-time and harvest. The earth rested upon pillars, while under it were immense fires, in which the demons were confined, and here the wicked were doomed to dwell; while above the vault were the Elysian fields, the home of the blest.

This wild astronomical and theological theory of creation was the prevailing idea among all peoples, five and six thousand years ago. Indeed, the true theory in regard to the solar system has been taught by the learned but a little more than three hundred years, the great mass of the uneducated still entertaining a belief in the ancient system, and are still quoting their sacred books in confirmation of it. The Phœnicians taught this flat-earth-and-vaulted-firmament theory at home, and in all their colonies. It was a part of the religious belief of all the nations bordering on the Mediterranean. It was believed by the cultured Greeks, as by the more modern Romans. The whole system of theology of all these nations was built upon this idea; and this was also true of the Hebrews, as their books furnish incontrovertible evidence. True, Herodotus, the Greek historian, ridiculed this teaching, and wrote:

"I cannot but laugh, when I see numbers of persons drawing maps of the world without having any reason to guide them; making, as they do, the ocean-stream to run all around the earth, and the earth itself an exact circle, as if described by a pair of compasses."

The reader will please remember that this was the idea entertained by him who gave us a history of the "flood," the "opening of the windows of heaven" through which to let down the rain, and the breaking up of "all the fountains of the great deep." This conception of the deluge came from Indus; it was as old as the most ancient civilizations; but it had been modernized with advancing thought as was the story of William Tell—as have all the myths which the learned have exploded—their origin lost in the sands of time, so antiquated that no one can trace their beginning, or learn when they were not believed as facts.

The mythical teachings in regard to a general deluge are not the only fabrications which have puzzled humanity, and, because of being interblended with a religious education,

have paralyzed investigation through many generations. The Egyptians taught that the world would be alternately purified by water and fire; that these were parts of the system which the Creator employed to prevent man from growing in power, and gaining a mastery over him! The teachings of barbarian races, slightly changed, have survived the ages; they have entered into the religious beliefs of the world, and will be as difficult to eradicate from the common mind as any other inherited error of so ancient an origin. Thos. Moore has well written:—

"The lover may
Distrust that look that steals his soul away;
The babe may cease to think it can play
With heaven's rainbow; alchemists may doubt
The shining gold their crucible gives out;
But Faith, fanatic Faith, once wedded fast
To some dear falsehood, hugs it to the last."

It is to be regretted that scientists are not permitted, without subjecting themselves to sectarian abuse, to pour in a flood of light upon the ancient fallacies which have crept into all our early teachings. Were they at full liberty to give the public their honest thoughts we should soon have a truer conception of the past, and a more exalted idea of the future; but ere that "good time coming" shall dawn upon the world, it is possible that many years may intervene.

Commencing with the story of creation, as borrowed from the Hebrew writers from countries where they had been slaves, wherein it is represented that the whole planetary and stellar systems are the out-growth of six days' labor, (not the production of a single mind, as the English reader finds it in his translation; but the task of *many gods*, as a correct rendering of the Jewish narrative, will show), with all the long incidental errors, following this first incorrect teaching, and ending with the looking forward to a general destruction of the material universe, when a grand conflagration will envelop all in universal ruin; when earth, and moon, and sun, and stars, will be "rolled together as a scroll," and disappear, while darkness and chaos succeed the present order of things, much is found that needs revision. He who is sincerely honest is hopeful that the day will not be too far distant when every false teaching shall receive that consideration it deserves; when every myth shall be exploded, and the sunlight of Truth shall illuminate all the dark corners of the world. This grand consummation of desire will usher in the *real* millenium, when "knowledge shall run to and fro as the waters cover the great deep."

THE BIRDS OF PREY OF NOVA SCOTIA.

BY J. BERNARD GILPIN, A.B., M.D., M.R.C.S.

IN making this list I have personally identified, with one or two exceptions, every species in it. I will not say that no other specimen may be added, but that if hereafter noted, it will be a very rare one to have escaped my notice of more than thirty years. Personal identification of each species also by the writer, even if in a narrow limit, adds always to the interest and value of a paper. In classification I have used Key to N. American Birds, by Dr. Coues, 1872, of the value of which it scarcely needs any mention from me. I have found, with one or two exceptions, all the birds of this Order common to North Eastern America, in Nova Scotia, and noticed those I expected to find and failed. From their nature and food they are rare everywhere, and one who has witnessed the scarcity of all animal life in our forest, and the little bird life even in our cultivated fields, is not surprised by finding a greater scarcity of this Order. The innumerable flights during the autumn of what are called shore birds, chiefly composed of the Genera TRINGA, TOTANUS and closely allied species in their autumn migrations, attracts numbers of the Genus FALCO. Our marshes, especially after mowing, which lays bare the runs of field mice, and the haunts of frogs, snakes and other reptiles, attracts the harriers and buzzards, and the sea shores of the Bay of Fundy, at ebb tide, left in far-reaching and muddy flats abounding in stranded fish, bring the eagles and fish hawks for their prey, the latter seizing its living prey from the shallow pools, whilst the former, when not plundering the fish-hawk, contents himself with the dead and stranded fish. Except the grouse, the hare, and perhaps shrews in the depth of the winter forest, or a white weasel or jay bird, or a red squirrel now and then, the stern winter has locked in snow and ice everything that makes food for the few owls that hibernate with us. The few eagles and fish-hawks I have dissected, I have found fat, even in winter; the hawks generally thin. I have never identified any kites in Nova Scotia, but my son has observed fork-tail hawks in the air, which I have also seen, but very rarely, most probably the Genus NAUCLERUS.

LIST OF RAPACIOUS BIRDS OF NOVA SCOTIA.

FAMILY STRIGIDÆ—(Owls).

Bubo Virginianus—Great horned owl.*Otus vulgaris* (var. *Wilsonianus*)—Long-eared owl.*Brachyotis palustris*—Short eared owl.*Syrnium laponicum* (var. *cinerium*)—Great grey owl.*Syrnium nebulosum*—Barred owl.*Nyctea nivea*—Snowy owl.*Surnia uhla* (var. *Hudsonia*)—Hawk owl.*Nyctale Tengmalmii* (var. *Richardsoni*)—Tengmalm's owl.*Nyctale Acadica*—Saw-whet owl.

FAMILY FALCONIDÆ.

Circus cyaneus (var. *Hudsonius*)—Marsh hawk.*Accipiter fuscus*—Sharp shin.*Accipiter Cooperii*—Cooper's hawk.*Astur atricapillus*—Goshawk.*Falco sacer*—Jerrfalcon.*Falco communis*—Duck hawk.*Falco columbarius*—Pigeon hawk.*Falco spavarius*—Sparrow hawk.*Buteo borealis*—Red tail hawk.*Buteo lineatus*—Red shoulder hawk.*Archibuteo lagopus* (var. *Sancti Johannis*)—Rough legged buzzard.*Pandion haliaetus*—Fish hawk.*Aquila chrysaetos*—Golden eagle.*Haliaetus leucocephalus*—Bald eagle.

You will find in this list, taken as regards its nomenclature from Coues' Key, that many generic as well as specific names are changed from Wilson, Audubon, Nuttall, Richardson, and even Baird, or other recent writers. The greatest change is with the specific. Whilst we accept the changes from the older authors as the necessary progress in the science, yet we can see in the differences from the modern ones that one principle rules them, a nearer return to truth, to the principle of returning to the specific given by the first discoverer of the species, allowing him the exclusive right of naming, and finally in birds almost identical in both continents the allowance of geographical variation from one common origin. This of course is the most philosophical way of settling points beyond our reach. Field naturalists can scarcely be allowed the privilege of criticising, which must be the result of intimate knowledge of large collections and libraries, and, as respects the author of the Key, still larger experience of field life. Yet one may be allowed to say that anything that reclaims the science from the divisions of sub-families and sub-genera, and innumerable lists of synonyms made, not for truth but for personal exaltation, must be hailed with pleasure by all true naturalists. Of the family of owls which inhabit our Province, the Halifax museum, with the exception of the great grey owl (*S. laponicum*), contains an excellent collection of every species I have identified myself. The great grey owl was taken some years ago in Pictou County, and a specimen was in the collection of the late Dr. McCulloch, of Pictou town. This is the only recorded instance I know of its being here. The great horned owl (*B. Virginianus*)

is common. It both breeds and winters, usually keeping in the thick forests, seldom coming out in the clear country. I have seen its young in the spring, and the adult at all seasons of the year. A specimen shot at Digby, Feb. 1876, when feeding upon a black duck, was nearly white, washed by pale ferruginous, and barred and spotted light brown. The pure white chin remained unchanged, as it has done in every individual I have examined, how much otherwise the plumage may have been altered. Though not resembling Richardson's figure, I thought it may have been the Arctic variety. Our camp fires attracted them when camping on the shores of a forest lake in Digby county, Sept., 1871. By answering their wild feline cries, we kept them about us the long night, unseen, yet continually shifting from one spruce fir to another, amongst which our camp was pitched. Their prey is nocturnal, and thus less likely to be known. Grouse, hare, and even ducks may be readily captured by this powerful bird, which uses its beak as well as its claws in destroying life. A poor pet crow, the favorite of the village at Annapolis, visiting every house for its bone, and sleeping now in an old porch, now in an unfinished church, or under the eave of inhabited houses, alarmed the inmates, beneath whose eaves it had sought a roosting place, by its shrill cries one calm midnight. On going to its rescue a large nocturnal bird of prey floated away. At sunrise it was found dead on the grass beneath, no doubt a victim of this powerful nocturnal prowler. Of the short eared owl (*B. palustris*) and the long eared owl (*O. vulgaris*), they may be said, though not rare, still not very common. I have Mr. Downs' authority that the short eared nests in Nova Scotia, near Halifax. Probably both do, yet the number of both that appear during winter proves migration to be the chief cause of their presence with us. Of the barred owl (*S. nebulosum*), my notes give May, as the month I identified him in the breeding season. I have no doubt he winters with us, but my notes have no monthly dates. The hooting of this owl comes down on the night wind to you like the loud broken laughter of many men. A stranger would easily suppose he was near a large logging party. The majestic snow owl (*N. nivea*) I do not think nests with us. He is usually a winter visitor, though I saw him once, August, 1854, on Sable Island, with all his feathery alpine plumage, sitting upon the hot sand, the snowy, thick muffled claws

reposing on sand that heated your touch. A few years after the island had been stocked by domestic rabbits, this bird made his appearance, in 1827, and ever after paid it an annual visit. I saw him patiently watching the burrow mouth, instantaneously to seize its emerging owner. He is usually our winter visitor, and like other species sometimes comes in flocks. In the winter of 1876 Mr. Egan, at Halifax, had fourteen specimens at one time. The settlers told me they sat like pigeons upon their barns, coming out of the forest at dusk. There had been no storms or local reasons for this migration which extended into New England. The hawk owl (*S. ulula*), is also a winter visitor. He shows himself sometimes in flocks. Some years ago there were more than a dozen brought into Halifax, then not seen for years, and of late returning singly. Of Tengmalm's owl (*N. Tengmalmi*) I have seen but few specimens, and believe it very rare. Four are the utmost I have seen in Nova Scotia. The Saw-whet (*N. acadica*) is common and resident, keeping the deepest forests as his abode, frightening the Indian at his bivouac, who never will answer him or allow any one to do so in his camp, for fear of impending misfortune. Yet he, too, appears sometimes in flocks in the open. During the spring of 1879, Mr. Egan had numerous specimens offered him. The little red owl (*S. asio*), so common in New England and also in Newfoundland (Reek's Zoologist, 1869,) I have never seen here, in which Mr. Downs joins me. In its migrations it passes perhaps north of us. In ending my remark on our owls, I may say that about four have been identified as nesting with us, the others are winter visitants, and that with the exception of the Great grey owl, there are excellent specimens of each species in the Halifax museum.

In passing to the diurnal birds of prey, the FALCONIDÆ, we find more power and strength developed in each individual, though denuded of their soft coating; the hind toe (in the owls very small comparatively) greatly increased, a greater propensity to use the claw than bill, and a greater ardour of temperament, and power of wing action. This family naturally separates itself into the harriers, the falcons, the hawks, the buzzards, and the eagles. I mean as regards Nova Scotia, since the kites and vultures never come to us. Of the harriers, resembling the owls in a facial circle, we have one species (*C. cyaneus*), a geographical variety of the old world harriers.

(To be Continued.)

THE CANADIAN SPORTSMAN AND NATURALIST.

No. 5.

MONTREAL, MAY, 1882.

VOL. II.

WILLIAM COUPER, Editor.

THE GAME LAWS OF THE PROVINCE OF QUEBEC.

A NATURAL HISTORY REVIEW.

It is notorious that for many years past Game Laws have been in force in the Province of Quebec; that these laws were repeatedly amended and even at this instant they are imperfect; that on all former occasions the alterations sought for were brought forward by parties who knew very little of the Natural History of the animals which are said to occur in the Province. In the Bill now before the Legislature of Quebec there is the heading *Moose, Deer, Elk, Caribou*. Now, to make the matter plain, the word DEER includes all which are hunted for venison. We have in this Province, four species of deer, viz.: the Elk, commonly called and known as Moose; two of Caribou and the Virginian Deer. These quadrupeds are invariably confined to certain localities, each having ranges of various extent. For instance the Virginian Deer has not a wide range in Quebec, and it may be now accidental in places where it was formerly abundant. The cutting down of forests accounts, in a great measure, for its disappearance. The Elk or Moose is also similarly situated, because its chief food consists of moosewood and aquatic plants; it is also extremely fond of mountainous regions, especially where there are lakes, which are not frequently visited by man. The deer known as Caribou of which we have two species, are generally confined to high latitudes, and it is only during winter that man can approach them. To make the Game Laws perfect, these animals should be indicated in the Act, by placing the scientific after the local name of each species—as Elk or Moose, (*Cervus alces*); Woodland Caribou, (*Rangifer tarandus*); Barren-ground

Caribou, (*Rangifer Grænlædicus*), and the Virginian Deer, (*Cervus Virginianus*). This would make the law definite with regard to these animals. Confusion will certainly arise from this nomenclature when not framed in a manner to be clearly understood by the sporting people of the Province. Greatly as are the inhabitants of the United States ahead of us in some matters of this nature, they will call animals by wrong names, for instance the large deer or Wapiti (*Cervus Canadensis*) of the Rocky Mountains, is vulgarly named Elk, while the latter is the animal we call Moose in Canada, and which is scarce near the Rockies. In the French and English copies of the Act, the word *Pekan* occurs. Now, surely, if the framer of this Bill went to any trouble, he would have discovered that this is the animal commonly called Fisher by English people, *Musclela Canadensis* of naturalists, and not the WILD CAT (*Chat sauvage*). Well, what animal have we here? We are told that it is the Raccoon (of uncommon occurrence in this Province). There is another common animal called Lynx (*L. Canadensis*) which is also called *wild cat* by country people, and although there is no true wild cat found in the Province of Quebec, it occurs in Ontario. As for Muskrat, there is no greater nuisance among the quadrupeds of this country. It burrows under the banks of rivers, making numerous holes whereby the fertile lands of the farmer (especially if a stream is overflowed in Spring), are destroyed; however, if all parties are satisfied with the protection of this animal, we are.

Regarding the feathered game, no bird called Partridge exists in this latitude. There are five species of Grouse occurring in the Province—i. e. the Ruffed Grouse (*Bonasa umbellus*), Sharp-tailed Grouse (*Tetrao pedioecetes*), rare in the valley of Lake St. John, Upper Saguenay; Spruce Grouse (*T. Cana-*

densis), two species of Ptarmigan (*Lagopus Americanus*), and (*Lagopus rupestris*), both winter visitors; the former common, the latter rare. Wild Swan should not be included in the Bill as all the North American species are *rara avies* in this Province. The Canada Goose (*Bernicla Canadensis*) is a wild goose; the Widgeon (*Mareca penelope*)—a rare visitor in Quebec—and Teal (of which there are two species) deserve protection. The Black Duck (*Anas obscura*) is certainly the duck of the sportsman, because it is the most game and prolific of all the wild ducks. The Mallard, Canvas-back Duck and Pintail are not specially protected although they are sometimes abundant on Quebec waters. But as this Bill protects all the wild ducks (fish and vegetable eaters) we will not further pause to point out mistakes in regard to what constitutes aquatic game. There is a vast difference between birds (ducks) that are good food and those that are not, the latter are allowed by law to live and destroy the fry of salmon and other valuable food fishes. Why this portion of the Bill is not properly put together, we cannot understand. The laws of Ontario regarding wild ducks, merely protect those that are thoroughly game, such as Mallard, Black Duck, Wood or Summer Duck, and Gray Duck, the latter, so far, is not identified or determined. All other species are classed as sea ducks, although not game, they are protected between 1st May and 15th of August. We are as anxious as the Provincial Government to protect insectivorous birds, and would be greatly pleased to see this portion of the Bill perfect. There are birds in this section of curious nomenclature—"Grives," we know them not. "Cow buntings,"—thank Providence, there is only one species in Canada; it is a parasite: a robber among its kind, and if the Hon. framer of the Bill, knew what it was, he would not have classed it as he has. "Bobolinks," the Rice Bird; what is extraordinary is that in the Hon. Mr. Flynn's

Bill, the scientific name given to this bird is not correct, (*Dolichonyx oryzivorus*), of dear old Swainson is now converted into *Dolychonix oryzivorus* by a Quebec legislator, and to add agony farther, the Starling (commonly known as the Marsh Blackbird), our two species of Grackle and the two species of Grosbeak (one a winter, the other a summer visitor), are classed as insect eating birds. We can prove that certain species of FALCONIDÆ or Hawks are insectivorous; that Crows, Waxwings and Shrikes are insects destroyers, and furthermore that we have two species of Shrike in the neighbourhood of Montreal—the Loggerhead (common), and the Great Northern Shrike (rare), both of which destroy insects during certain portions of their residence with us. By the way the latter is another species to which the scientific name is given wrongly. Compare text of the Bill. C.

THE NEW GAME LAWS FOR THE PROVINCE OF QUEBEC.

A bill to amend and consolidate the Game Laws is now before the Quebec Legislature. The principal changes are as follows:—

Moose, Caribou and Virginian Deer.—Present close season, 1st February to 1st September; proposed close season, 1st January to 1st September.

Wild Ducks and Geese.—Present close season, 1st May to 1st September, west of Three Rivers, and 15th May to 1st September east of Three Rivers; proposed close season, 1st May to 1st September throughout the Province.

Ruffed Grouse.—Present close season, 1st March to 1st September; proposed close season, 1st January to 20th August.

Canada Grouse, Ptarmigan.—Present close season, 1st March to 1st September; proposed close season, 1st February to 1st September.

Hares, snaring (this is permitted by the present Act) to be prohibited.

By the new Act, all persons who shoot are required to take out license, non-residents of the Province to pay \$20 for a license to hunt

any kind of game in each district ; residents to pay \$1 to \$2 for each district. License good for the whole Province, \$50.

The proposed amendments in regard to the close seasons are to be desired, and if the Spring shooting of Black Duck, Mallard, Wood Duck and Teal were prohibited, the Bill, in this respect, would meet the views of most sportsmen. Numbers of Black Duck and Wood Duck breed in suitable localities throughout the Province, and many more would, doubtless, remain to nest if protected in the Spring, as they commence nest-building early in May, and the full number of eggs is usually deposited before the latter part of that month. It is true many nests are found as late as the middle of June, but this is the result of the birds having been disturbed in Spring and prevented from occupying the places they had first selected, as in the most Northern parts of the Province, where they have been undisturbed, nests have been found as early as the 15th May. The first principle of all laws for the protection of game is that the quadrupeds and birds protected should not be disturbed at those particular seasons defined by Nature for the perpetuation of their species. It is obvious, therefore, that it is wrong to permit the shooting of these ducks until 1st May, as they have paired and selected their places for nesting long before that time. The proposed division of the Province into districts, and the imposition of a license fee for the privilege of shooting, is not likely to meet with much favour from sportsmen, who have already to pay pretty dearly for the privileges they enjoy. The confusion likely to arise from this division, and the impossibility of collecting the tax impartially will make this portion of the Bill most unpopular, not only to sportsmen, but to farmers and others who, from time immemorial, have been accustomed to enjoy a little shooting in their spare time. The necessity of securing a Government license to hunt on their own farms, cannot but seem arbitrary ;

and we fail to see any good to be derived from the imposition of this tax as the revenue accruing therefrom will be more than consumed in the cost of collection.

A careful revision of the Bill is necessary before its final reading as several omissions occur, and the use of local names may lead to some confusion.

A MYSTERY.

A magnificent adult Moose head was lately sent by W. F. Lewis, Esq., of this city, to me to stuff. There is a mystery about the ears of this head. Each ear has three deep cuts longitudinally from the apex towards the base. The edges of the cuts *are healed and covered with hair* similar to the outside margins of the natural ear. Who or what cut the ears of this Moose, and what was the animal's age when these cuts were made? The head was sent from Pembroke by Messrs. T. & W. Murray to whom I wrote asking if they could give me some information regarding these ear-cuts, suggesting that at one time (probably when young) the animal may have been the property of some one who had it partially tamed ; that the cuts were then made as marks of identity, and that it afterwards escaped to the woods. I have had deer heads with fresh ear-cuts which were done by the hunter after the deer was shot, but this one is the first instance of the kind coming under my notice. Messrs. Murray say :—" We do not think that it was ever tamed as there are no settlers in the section it was taken from. The Indians might probably keep one a short time when young, with a view of taking it where it could be disposed of alive, but they very seldom keep them any time." I may probably have some further information regarding these cuts. They do not represent wounds made by a quadruped ; they resemble cuts made with a knife ; but when and where they were made, is the mystery. C.

ORNITHOLOGICAL QUERIES.

In former numbers of this journal we have asked for information regarding the economy of certain birds inhabiting Canada, of which very little is known. The natural history of the following species appears to us, worthy of further investigation.

The Gray Sea Eagle or Ern (*Haliaeetus albicilla*) It was described by Cuvier. Now, there is a doubt expressed by American ornithologists as to its being a true species. An eagle resembling the European Ern occurs in Canada to which the name Gray Sea Eagle is applied, but some persons contend that it is only the young of the Bald Eagle. Mr. R. Rowe, of St. John, N.B., writes to ask "If the female of *Haliaeetus leucocephalus* (Bald Eagle) has plumage same as male—*i. e.*—with white head and tail. I am inclined to think that the female has not the white head and tail. I saw a pair this fall, one had head and tail like snow, and the other which I concluded was the female, was brown. I am speaking of course of mature plumage. If I had had my rifle with me at the time, I believe I could have killed the two, as they were not twenty yards from me, and both in a line sitting on an old stump." Can any of our correspondents inform us if the Northern Sea Eagle (*H. pelagicus*, Siebold), has been shot in Canada? These three eagles are evidently mixed up in such a way that it will take some time to separate them properly. Have ornithologists compared the eggs of *H. pelagicus* with those of *H. leucocephalus*, or can the egg of *H. albicilla* be produced as identified?

Golden-crested Wren, (*Regulus satrapa*, Licht.) I saw this species feeding its young at Mingan on the North Shore of the Lower St. Lawrence. Has its nest been found in Nova Scotia, New Brunswick or the Western portion of the Province of Quebec?

Tit Lark (*Anthus ludovicianus*, Licht.) This species visits the Provinces of Ontario and Quebec in the Fall; is said to nest in high latitudes. The bird is terrestrial and possibly the nest may approach the form of that of a *Melospiza*, and may therefore be overlooked. I have never noticed the Tit Lark in Ontario or Quebec in Summer, hence it is questionable if it nests in the vicinity of latitude 46.

Blackburnian Warbler (*Dendroica Blackburniae*.) This pretty warbler passes north through our forests about the middle of May. Has its nest been found in New Brunswick or Nova Scotia? I saw numbers of this

species in the woods of Labrador on the 17th June, but could not discover the nest. I found the nest of the Black and Yellow Warbler (*D. maculosa*) at Natashquan on the latter date.

The Evening Grosbeak (*Hesperiphona vespertina*, Bon.) Occurs in Western Ontario. Can any of our correspondents send us a description of its nest, and the geographical range of the bird in Canada? How far East has it been noticed in Ontario?

The Pine Finch (*Chrysomitris pinus*, Bon.) Has this bird been found breeding in Canada?

The Lesser Red-poll (*Aegiothys linaria*, Cab.) Two species of Red-poll are sometimes common in the Province of Quebec in the Fall, but I have not yet met with a person who found their nests in Canada.

The Sea-side Finch (*Ammodromus maritimus*, Sw.) Can any of our Nova Scotian or New Brunswick ornithologists inform us if this finch breeds within their Provinces? I found nests of a finch on the Labrador coast which I took for this species, but at the time had no facility to identify them.

The Tree Sparrow (*Spizella monticola*, Baird.) This is another species which appears in the Province of Quebec. It passes north in April. The Fall birds are mostly all young. Probably they nest in the woods on the Laurentian Mountains. I would like to obtain information regarding the nest of this species.

The Magpie (*Pica Hudsonicus*, Bon.) This bird is said to frequent the vicinity of Lake Superior. Has its nest been discovered near the latter region? C.

BULLETIN OF THE NATURAL HISTORY SOCIETY OF NEW BRUNSWICK.

The first proceedings of the Natural History Society of New Brunswick are before us; the matter, scientifically viewed, is fully equal to that issued by older institutions. It contains a catalogue of the birds of New Brunswick, by Mr. Montague Chamberlain, who appends brief notes relating to their migrations, breeding, &c. The discovery of the breeding localities of birds forms the most important research in Ornithology at this age of human inquiry, and a compiler of matter relating to this portion of American bird history, should certainly be encouraged in order to have it authentic. From Mr. Chamberlain's notes we obtain new information regarding a few species which were heretofore considered mysterious as to their breeding places, and we wish

other Oological students to follow his example and penetrate the primitive forests of New Brunswick to add additional facts to this excellent list. The Society's Committee on Botany have made a good beginning in issuing a list of plants found within the Province, and we have no doubt that through the exertions of Messrs. Hay, Chalmers and Vroom, the Flora of New Brunswick will be as thoroughly worked up as the birds have been by Mr. Chamberlain. The Bulletin is creditable to the Society and printer, and doubtless No. 2 will contain matter of similar interest.

REVIEW.

THE FARMERS' ADVOCATE, published at London, Ontario. The April number of this serial contains two handsome engravings (specially designed for the journal), and is replete with matter interesting to the Agriculturist. Subscription, \$1.00 per annum.

We call the attention of those of our readers who are fond of the Rod, to the advertisement headed "Sportsman's Retreat," in this issue. Our friend should have a full house during the season; guests are promised plenty of sport.

Correspondence.

To the Editor of THE CANADIAN SPORTSMAN AND NATURALIST.

DEAR SIR,—Referring to your "Ornithological Queries" (just the thing that is wanted, and answers to which I shall look forward to with much interest), perhaps it will not be uninteresting to lovers of Ornithology to know that last week was shot on the Belvedere Flats, about twelve miles from this city, a fine female specimen of the Trumpeter Swan, (*Cygnus buccinator*). It was very thin, but in excellent plumage, entirely white with the exception of head and neck, which had markings of a very light rusty brown, so light that at a distance of a few yards the whole bird appeared white. Measurement from tip to tip of wings, 6 feet 6 in. By the slight markings on the head and neck, I concluded it was a young bird. This appears to be quite a *rara avis* in these parts. Last fall, there was killed

at Dick's Lake, N.B., a Florida Gallinule, (*Galenula galeata*.) At Musquash, N.B., seventeen miles from here, on the 4th April, last year was shot the Purple Gallinule, (*Porphyrio Martinica*), and another last September at Quaco, N.B.; the latter was in fine feather, and appeared to be a young bird. Several Green Heron (*Ardea virescens*), were taken last September at Brier Island, N.S.* At same time were seen large flocks (?) of the Scarlet Tanager, (*Pyrranga rubra*), and Baltimore Oriole, (*Icterus Baltimore*). We have had also, this spring, quite a flight of Cross-bills, both the red (*Curvirostra Americana*) and the white-winged (*C. leucoptera*). The pine Grosbeak, (*Pinicola Baltimore*), is frequently found in this Province, but whether they nest here or not, I have been unable as yet to determine. With the exception of the flocks of Tanagers and Orioles mentioned above, I have seen all these birds *in the flesh*.

I am, yours truly.

R. ROWE.

St. John, N.B., 10th April, 1882.

* An island in the Bay of Fundy, at the S. W. extremity of Digby Neck, on it is a lighthouse.

NIDIFICATION OF NUTHATCHES.

SIR,—When I wrote the article published in the April number, I stated that I had not seen the nest or eggs of *Sitta Canadensis*, and in a note to Mr. Dunlop, giving some of my observations regarding the nidification of Nuthatches, I stated that on one occasion I had seen the nest of this bird—*Sitta Carolinensis*—in a cavity of a decayed tree, like that of a wood-pecker. Subsequent investigation amid the wild haunts of these birds, proves that the red bellied species are far more numerous than I had supposed, and a review of my observations, taken *at the time*, now makes me confident that the nest referred to belonged to the latter bird. It was in the early part of June 1866, I was cutting down timber on the margin of a beaver meadow where the wood, mostly balsam, cedar, and white wood (linden), was thick. I happened, among others to fell an old linden stub, and to my regret and the great distress of the parent birds, found that it contained the nest of a Nuthatch, in which were three young ones, which were nearly killed by the fall of the tree. The cavity in which the nest was placed was about twenty feet from the ground, made like that of a wood-pecker or chickadee, and not more than

eight or ten inches deep; this excavation, I have no doubt, was the work of the birds themselves. In the bottom was a small quantity of fibrous, woody matter. This nest was altogether different to any of the Nuthatches that I have seen, and it struck me at the time as very peculiar. I also noted that the birds were darker in color, and their notes considerably different to those commonly observed in the high, hardwood lands, but until years afterwards, when I procured a copy of "Ross' Birds of Canada," I was not aware that the Red and White-bellied birds, were distinct species. Since then I have observed that the habitat of *Sitta Canadensis* is generally the deep evergreen woods, and lately, I note, that its call is louder, more prolonged and plaintive than that of its white-bellied congener, which latter is partial to the hardwood regions, and always makes its large nest (formed of moss, fibrous bark and hair) in the natural hollows of trees. Years ago I had observed some of these birds excavating cavities in old stubs, generally softwood timber, and that in the fall of the year, they laid up a supply of different kind of seeds in such place; I am now disposed to believe that this was particularly the work of the Red-bellied species.

W. L. KELLS, Listowel, Ont.

SUPPOSED NESTS OF THE CROSSBILL.

On the 10th of April, when taking a ramble for ornithological purposes, with my two boys, in a cedar swamp, north of this town, I noticed a number of nest-like structures, placed on the branches of cedar and other evergreens, generally about twelve to twenty feet from the ground. I had often, in different places, noticed similar structures before, always in the early spring, and knowing that these had been made in the winter, supposed that they were the work of some squirrel. On the above date, however, curiosity led me to examine several of these structures more closely, and to my surprise, I found that they were the nests of some birds, and had evidently been recently occupied. Compared with the size of the bird that must have built and occupied these hut-like formations, they were large. One which I brought home, measured two feet six inches in circumference; yet the inside cavity was only about four inches in diameter, and the entrance showed that the body of the builder was about the size of that of the pine finch. The outsides of these nests were formed of moss calculated to keep out cold, and throw off the

rain, while the inside was thickly lined with the soft fibrous dry cedar bark, and in some cases, small quantities of hair. The materials of the entrance were of such quality and arrangement as to almost close when the occupant went in or out, and it would appear also that it was the intention of the owners to cover the contents when they found it necessary to leave it for the purpose of procuring food. For a while I was puzzled to know what species of the feathered race had made these nests, and therein reared their young in the midst of our cold and stormy winters. I then recollected and re-read the article in the last February number by Dr. Garnier, on the Crossbills, the mystery was solved. These moss-made hut-shaped structures were the nests of *Loxia curvirostra*. I then recollected that in the winter of 1866, and following years, I had observed these birds in flocks in the barn-yard and among the evergreen woods of North Wallace, where also I first noticed those curious nests, but never thought they were the habitations of birds, or that any bird could rear their young at such a season of the year in our climate. Lately a neighbour informed me that he saw the nest of a bird with four young in the month of March, but could give no information as to the species or formation of the nest. It was, of course, a crossbill. I did not see any of these birds this season, they had evidently departed northward before my advent among their winter homes. I hope another season to see their eggs.

W. L. KELLS, Listowel, Ont.

Sitta Canadensis. When I first discovered the nest of this bird, both male and female were busy gathering soft material to complete their nest; the spot selected for this purpose being a hole in a dead tree, about ten feet from the ground; the hole, however, was not the work of these birds, but one which had probably been made by a squirrel or woodpecker some seasons previous, the cavity being about fourteen inches deep. *Sitta Carolinensis*. As the northern limit of this Nuthatch, as a winter resident, is somewhat indefinite, I might mention the fact that one was taken at Westfield March 10th, 1882.

HAROLD GILBERT.

St. John, N.B., April 23, 1882.

DEAR SIR,—In answer to your query in the March number of the SPORTSMAN AND NATURALIST, concerning the nesting of *Antros-*

tomus vociferus (Bp.), I can say that I have found several nests in the Province of Quebec, in latitude 46° . The bird is quite common in the County of Ottawa, P.Q. Mr. W. P. Anderson tells me that he found both the Whip-poor-Will and the Night Hawk very common in the North-West Territory, some distance north of latitude 49° . Can you tell me whether there is, so far, any record of the Western Grebe (*Podiceps Occidentalis*, *lawr*) being taken in Ontario or Quebec? Prof. Macoun, I think, found it north of Winnipeg. Mr. George White, of this city, shot a pair near here last season, but the skins have unfortunately been lost.

W. L. SCOTT.

Ottawa, Ont. April 26, 1882.

NOTE.—The Western Grebe occurs rarely in the Province of Quebec. I purchased one in the Quebec market.—C.

THE BIRDS OF PREY OF NOVA SCOTIA.

BY J. BERNARD GILPIN, A.B., M.D., M.R.C.S.

He is common, and most probably breeds with us, as he is seen during that season, but I have no note of his nesting. He leaves us during November, the swamps then being frozen, and the mice, reptiles and snakes, his usual food, hibernating. He is seen beating our new mown fields and swamps, but never hunting the shores abounding with shore birds. The females and young are much more abundant than the slate grey male. In his habits he resembles the buzzard, as he does somewhat in bill and claws. In the next family of hawks we have the sharp-shin (*A. fuscus*), Cooper's hawk (*A. Cooperi*), and the Goss-hawk (*A. atricapillus*). The sharp-shin is, perhaps, our most common hawk. I have noted him in May and in December. Little doubt he breeds with us, though I do not know his nest. Though slenderer than the falcons, his bill lighter, and upper mandible scarcely notched, he is by no means their inferior in audacity and headlong pounce. One broke the glass of Mr. Downs' aviary in attacking a canary, seen through. He will often attack caged birds hanging in country houses, and even enter the city for the same game. Cooper's hawk (*A. Cooperi*), an enlarged model of the last, is very rare. I am indebted to Mr. Egan for notes of one specimen mounted by himself and afterwards sent home to England. I have never seen it myself. The Goshawk (*A. atricapillus*) is common and seen during the

breeding season, though I have no notes of time. A pair wintered near the light-house at Digby Gut, 1880; but this is unusual. The vicinity to the sea would make one suppose they lived upon fish. Few hawks of any species, save eagles, are seen after December, even the fish hawks leave us. One would suppose a duck upon the water would be an easy prey for them, and our winter shores are covered by them; but I have never heard or have read of any hawk making like the fish-hawk what may be called a water pounce. The Goshawk is the type of the great hen hawk of the farmers' wives. He comes out in the open, is not seen beating marshes like the buzzards and harriers, or the sea sands like the smaller falcons, but prowls about the homesteads, coming suddenly with the swiftness of the gale from nowhere, and sweeping a hen or chicken from the very feet of its owner, gone as suddenly as it came, and losing in the deadly rush for a time that caution and wariness which ever keeps him from the vicinity of man. The next Family are the Falcons; a more powerful organisation comparatively; a keener ardor and untamed spirit; the habit of taking their prey with a pounce from a tall tree, or perpendicularly from the air, rather than hunting along the surface; a stronger, shorter, and peculiarly notched bill, and pointed wing, define this family as it were abruptly from the others. It is the type of the highest excellence of the whole order. Of six species inhabiting North America, four are found in Nova Scotia; two probably nesting, the others rare, and as respects the jeralcon accidental visitors. In *F. Sacer* we miss the old name so long given by naturalists to the falcon of antiquity, but bow to the law that gives to the first scientific discoverer (Forster) the right of the specific name. Of this historical bird, the companion and pet of mediæval princes, the subject of the ancient pseudo science of hawking, with all its complex phraseology, I am indebted to Mr. Downs for my sole note. One specimen was mounted by him some twenty years since, being taken by a vessel on the coast and brought to Halifax, and a second specimen is exhibited this evening by him. They are not uncommon at Newfoundland, being called white hawks, and sometimes stray south of us, into New England doubtless taking the inland route. The duck hawk (*F. communis*), and here again we lose the fine old name *peregrinus*, a bold and beautiful bird, with the eye, toothed bill,

and powerful claw of its race in the highest beauty and perfection in my experience, is very rare. There was a good specimen in the Halifax Museum 1870, and Mr. Downs has noted it. This falcon is the *anatum* and great footed hawk of American writers. The pigeon hawk (*F. columbarius*) is perhaps the most common hawk of our Province. My notes are September and November, but still I believe he nests with us or is found during the time of incubation. He is a true falcon, in dash, temerity and force. He will strike a duck upon the wing and lacerate and tear up the whole back and neck region so as to produce death. He occurs here with a variation of colour. In the Provincial Museum are specimens with four obscure whitish bars upon tail. A specimen in Mr. J. M. Jones' collection agrees with this; the bars broader. Another, shot by Mr. Alfred Gilpin, has five white bars, the fifth obscured by tail coverts. Another specimen, shot by John Baxter, Nov. 4th, 1880, has five dark bars crossing the tail, the fifth hid by tail coverts. In this specimen the colour was more plumbeous on back and rump and tail, and more whitish below. I have not specimens enough to show any analogy between the plumbeous coloured back and darker tail bars, and whiter colour below. Coues asserts the female has white bars, Reeks (Zoologist, 1869,) describes it at Newfoundland, as having dark bars. The question is also complicated by Richardson's merlin or *Aesalon* of the old world, very allied to this species, being found in America, though denied by Coues. We find this very active and bold falcon on the flats of the sea shores, pouncing aerially upon the *TRINGA*, *TOTANI* and other shore birds in their autumn migration. He lingers into November before he leaves us. There is no prettier sight than on a warm September day, in the Digby Basin, when the great Bay of Fundy tide has filled up to the very rushes the salt water estuaries and creeks; when the peeps and shore birds are like snowy drifts on the edge of the tide, waiting for the ebb; when the herons, coming full twenty miles from their heronry by the forest lakeside, are roosting in awkward groups on the spruce pines and birches overhanging the tideway, also waiting for the ebb; than an instant alarm of shrieks from the herons, followed by an instant barking of the crows, rising and falling about the tops of the pines, disturb you, as floating in your canoe you are watching how a feathery gull, or an early scoter, is breaking the majestic mirror all around you.

Malti Pictou, your Indian, says, "May bee herons don't like the hawk"; and then, as you turn your eyes landward, you see the hawk sailing in short circles around and then with a sweep fetching down upon the herons, recovering himself and passing with lazily flap of wing slowly their roosting trees. He, too, is waiting for the ebb. The sparrow hawk (*F. sparverius*) is not rare with us; my notes of him are in September, but Mr. J. M. Jones allows me to say, he has seen them during the summer in the valley of Annapolis, with all the habits of a resident bird, and probably nesting. Its beautiful colouring and bold upright form and audacity makes him everywhere a marked species. Of the next family of buzzards, I have identified three species. This family, more robust than the last and more powerful in form, have less audacity, sitting for hours listlessly on a dead tree, living on the smaller mammals and reptiles which, flying low, they snatch rather than pounce upon, are still audacious plunderers of the farm yard. Of the Red-shouldered hawk (*B. lineatus*) I have only Mr. Downs' notes. I have never seen it. The winter falcon (*A. lagopus*) is seen rarely here. A specimen in the Halifax Museum agrees with Richardson's figure and description, the colours scarcely so bright. I saw one specimen of a black hawk in Mr. Roue's collection, at Halifax, 1870. It was alive and therefore could not be examined closely, but it looked so very unlike, in size and figure, the *lagopus*, that I could scarcely call it a nigratism of that bird. But still I have nothing explicit enough to call it a true species, especially as the best writers unite in not considering it such. I can not but think there is a lost hawk in this family. The Red-tail hawk (*B. borealis*) is a common hawk with us. My notes give him the middle of April, Summer and November resident, but leaving us in winter. Our specimens, in the finest nuptial plumage, differ from Richardson's description both in the colour of tail and breast. They have very much more brown and ferruginous on breast, and the tails of the brightest chestnut red, the two outer tail feathers obscurely barred. Richardson says of his specimen, killed at Carleton house, May, 1827, "The tail is brownish orange, tipped with soiled white, with a subterminal band of blackish brown there are also traces of thirteen other brownish bars."

(To be continued.)

THE CANADIAN SPORTSMAN AND NATURALIST

No. 6.

MONTREAL, JUNE, 1882.

VOL. II.

WILLIAM COUPER, Editor.

TO HEALTH AND PLEASURE SEEKERS.

This journal is the best medium to advertise Sea Bathing localities and healthy inland Summer Resorts, especially where good shooting and fishing can be obtained. Our subscribers are generally gentlemen of means, and just the parties who visit new places annually to enjoy themselves.

THE CANADA LYNX.

(*Lynx Canadensis*.)

A subscriber writes to say "that Mr. Garnier is wrong in stating that the above-named quadruped have never been seen in the Peninsula (of Ontario I suppose) south of the Ottawa River!" He informs us 'that they are still to be found in the County of Simcoe, and that he has found them in his own woods on Lake Simcoe. A remarkable fine specimen measuring very nearly *forty-three* inches from nose to tail was sent to him by one of his sons, shot in the County of Frontenac, near Skunk Lake, about three months ago. The two species, the Red Lynx (*Lynx rufus*) and the *Lynx Canadensis*, though resembling each other in many respects, yet have such distinctive characteristics, that they cannot well be mistaken for each other."

NOTE.—The Canada Lynx was not uncommon when we resided in Toronto about thirty years ago, and although its fur is used for robes, &c., and many are annually destroyed, it is not possible that it is annihilated in Ontario. The two species are arboreal, and as the woodlands are being cut down and farmlands extending, these animals, like many others, are pressed back to the mountain solitudes, where they can procure food and bring forth their young. This accounts for *L. Canadensis* being more abundant north of the City of Quebec, where large tracts of woodland are almost as primitive to-day as they were one hundred years ago. Our fur-bearing animals are doubtless decreasing, especially in the more cultivated and open portions of Canada. At one time, the Hudson Bay Co., although traders in furs only, protected these animals by a proper system, ordering the Indians to procure certain species during the season,

therefore allowing other species to multiply, thus they kept up the stock in a natural way. But of late years, hunters and fur traders visit the grounds which formerly the Company held within themselves. Now, fur-bearing animals are trapped by residents on the Labrador coast at all seasons. The Indian seeing his white brother doing this, as a matter of course, follows his example, but the result will be ultimately disastrous to the hunter- and quadrupeds. The government should certainly stop people from killing fur-bearing animals out of season, and we are pleased to notice that the new Game Laws provides that "the Lieutenant Governor in Council may, in his discretion, prohibit the hunting or killing of any game or fur-bearing animals, for a period not exceeding five years." This is sensible, but at the same time, we have no objection to the muskrat being destroyed at all seasons when they commit havoc on a farmer's land by burrowing under creeks and rivers on his property, but martin, otter, mink and beaver should not be destroyed out of season.

The editor of this journal is not responsible for matter sent by correspondents. When manuscript is placed in our hands for publication, any statements therein, of which we have a doubt, will be invariably corrected before the compositor receives it. Were it not for our long absence from Ontario, Mr. Garnier's remarks regarding the Canada Lynx would have been noted at the time they were published.—C.

ORNITHOLOGICAL QUERIES.

The Canada Jay (*Perisoreus Canadensis*): A great deal has been written regarding the habits of this bird, but very little of its history is given during its nesting season. Its nest was found in Nova Scotia, Mr. Dickinson of Springfield, Mass., says he has eggs from the latter Province. It must nest about the same time as the Crossbills, as on my visit to Labrador, specially to obtain the eggs of this bird, I noticed the young in May, at a place called Watchshesho. They were following their parents, flying from tree to tree, but their heads were covered with white downy feathers, therefore, I must have found them in the vicinity of their nest. Can any of our

correspondents send us a description of the nest; the month of its completion; the locality and tree in which it was built? From seeing the young so early in Labrador, we think that the eggs must have been laid in March or April, when the land was deeply covered with snow. The stomachs of the young birds shot at Watchshesho were filled with a species of swamp cranberry.

Have any of our correspondents discovered a Canadian nesting-place of the Wild Pigeon (*Ectopistes migratoria*) of late years?

The Northern form of Sharp-tailed Grouse (*Pediceetes phasianellus*) occurs in the valley of St. John, Upper Saguenay in winter. Has its nest been found in Canada?

The Rock Ptarmigan (*Lagopus rupestris*) is also occasionally found in winter. The species evidently nests on the north coast of the Lower St. Lawrence. We would be pleased to hear from Oologists regarding the summer locality of this bird.

The Red-breasted Snipe (*Macrorhampus griseus*) is occasionally shot in the Province of Quebec, while on its western flight in spring. Has its nest been found in Ontario?

Jack Snipe (*Tringa maculata*) are sometimes abundant in swamps about the 20th of May. Who discovered its nest and determined its eggs in Canada?

The Solitary Sandpiper (*Rhyacophilus solitarius*) is also seen about the end of May, near creeks on the margin of forests. Has any person found its nest in Ontario?

Did any Oologist discover the Field-Plover, commonly known as Bartram's Plover (*Actiturus Bartramius*) breeding in Canada?

The Yellow Rail (*Porzana Novaboracensis*). This pretty little game-looking Rail breeds in our northern swamps, as they have been shot on snipe grounds behind Quebec in Autumn. They pass over the latitude of the latter city, probably north of the Laurentian mountains. Can any of our correspondents send us information as to its nest location, its form and material of construction; whether the habits of the species are similar to the other Rails? Any portion of its summer history would be of interest.—C.

MONTREAL BRANCH, ENTOMOLOGICAL SOCIETY OF ONTARIO.

The ninth annual meeting of this society was held on the 16th May, at the residence of the President, H. H. Lyman, Esq. A very favorable report was presented for the past year, and the society congratulated on its

success and the interest taken by the members in this important branch of Natural Science. Eight meetings were held during the year, (there being a vacation in summer), at which six original papers were read, and many valuable observations placed on record with regard to our Montreal insect fauna. The titles of the papers are as follows: "Notes on some species of HYMENOPTERA occurring at Montreal." "On Instinct in insects."

"The Pickled Fruit Fly, *Drosophila ampe-lophila*, Loew." "On the Genera HEPIALUS and STHENOPSIS in Canada." "Notes on the CALLIMORPHAS in the Boston Museums, as compared with Montreal species." "List of LEPIDOPTERA collected in 1881, by Dr. Bell, of the Geological Survey. A valuable donation of books, from the Society in London, Ontario was also thankfully acknowledged.

The following gentlemen were elected to office for the ensuing year: H. H. Lyman, M.A., *President*, W. Couper, *Vice-President*, G. J. Bowles, *Secretary* and *Treasurer*, F. B. Caulfield, J. G. Jack and E. D. Wintle, *Members of Council*.

The members had the pleasure of examining the celebrated work of Boisdual and Leconte on the DIURNÆ of America, and also the beautifully executed works of Professor Townsend Glover, of Washington, U.S. on the HEMIPTERA, and on Cotton worm insects. The latter books are profusely illustrated with etched plates, and the reading matter is lithographed from the Professors manuscript in fac-simile. All of these works are, we believe, unique in Montreal.

The prospects of the coming season's collecting were also discussed, as well as the various entomological problems at present engaging the attention of the society, and the members separated with pleasant anticipations of the summer expeditions in pursuit of their "untaxed and undisputed game," by field and flood, over the mountain slopes, or through the leafy woods, and gaining at one time three important things,—health, recreation, and some insight into the mysteries and beauties of nature.

PETRIFIED NEST AND EGGS.

While examining the collection of Dr. S. Woolverton of this city, I was shown a petrified bird's nest, containing two eggs, which was found in a cave near Woodstock, Ont., several years ago. It seemed to be formed of sticks, which outside were placed longitudinally.

ally, but in the cavity laid horizontally. Many were as much as five-eighths of an inch in diameter, but probably increased by their coating of lime precipitate. What had the appearance of moss was laid around the edges. The eggs, also petrified, lay near the centre of the nest, the larger end of one adjacent to the smaller end of the other. The external dimensions of the nest are 5 x 5 inches, the cavity being $3\frac{1}{2}$ x 3; the eggs both in size and appearance resembling a chaparral cock's. The whole weighed about two pounds, all the interstices between the sticks having been filled with the carbonate, welding them into a homogeneous stony mass. As a whole, it greatly resembled the lava-like formation of stalactites generally. The species is unknown but the doctor thinks it belongs to a Pewee, the eggs being abnormally enlarged by the lime formation, as also the straws, which have the appearance of sticks.—G. S. Smith, London, Ont.

Correspondence.

BIRD NOTES.

To the Editor of THE CANADIAN SPORTSMAN AND NATURALIST.

DEAR SIR,—As previously intimated, the Messina Quail, imported by Col. W. Rhodes, of Benmore House, wintered at his request, in my aviary, were let loose at Spencer Grange this spring. The event took place on the 20th May inst.—Buckwheat their favorite food was strewed in the woods and the birds cast out free. You may also be pleased to learn that Col. Rhodes, who returned home per "*Circassian*" on the 17th inst., brought out to Quebec, another supply of Sicilian Quail, close on one hundred, all of which he turned loose the next day, at Sillery, towards the Gomin Wood, in rear of Benmore House. The experiment was unavoidably made late, on account of the backwardness of spring. In ordinary seasons, it might take place on the 1st May, so as to give the birds a chance to nest early and have their young full fledged, healthy and strong in September following. I hope yet to hear that some of your public spirited Montreal sportsmen and well-to-do citizens will try similar experiments in the wooded and sheltered declivities of Mount Royal, whose southern aspect seems most favorable for this purpose. Let us now mark

results of this spring's operations. As a former resident of Quebec, you must be well acquainted with the dates and particulars of the spring migration of our Canadian birds, especially that of the Robin (*Turdus migratorius*), on his way to the ice-bound regions of Hudson Bay, where Sir. John Richardson, during the leafy months met the Robin in such numbers. The spring and fall migration of birds has ever been shrouded in mystery and the Robins are no exception to the rule. For the last twenty-two years, which I have spent at Spencer Grange, (as you know,) is the smaller half of Spencer Wood proper, the spring migration in the early days of May has been uniform and regular. It was difficult to ignore even in a parliamentary or Pickwickian sense the presence and loud warblings of the two hundred feathered musicians, who on some occasions have, undisturbed, elected domicile here in May, for two weeks on a stretch. Night and morning, these *virtuosos* poured forth floods of wild minstrelsy, in such defiant, loud, merry, lawless tones that one might have been tempted to believe the place belonged to them—possibly as Irish tenants of the land. The programme ran thus—at 6 a.m., a bath in the *Belle Borne* Brook; at 8 a.m., the morning hymn or performance; on the rising of the curtain, a grand rehearsal: the execution, superb, highly artistical—shall I say, æsthetical. Then, a full stop—a break in the song—a rush, an invasion *en masse* of the moist meadow adjoining the lofty pine, ash, and maple trees which girdle the grounds. A few pair of Robins would cross over to lunch at Woodfield, on caterpillars, earth worms, &c. Some jaunty bachelors whisking their tails and wings, accompanied by sprightly or demure, love-sick lady-birds, lighted under the groves of Spencer Wood, to gossip, frisk and flirt on the grassy margin of the historic *ruisseau Saint Denis*, where more than a century ago, the valiant Wolfe climbed to conquer or die: the bulk of the orchestra, possibly, accompanied by the *Impressario*, loved to linger the livelong day, under the leafy domes of Spencer Grange, within reach of their bathing ground—the *Belle Borne* Brook. Such the usual accompaniments of the annual northern migration of the Robin. Nothing of the kind this spring. The only Robins, a few pair probably hatched on the place—brought back by the bump of locality or memory of places. No spring wave of emigrants this season to the north—our way;—another route through

a warmer latitude may have been selected. But I must close; I may in my next have something to say about other dear friends—the Song; White-crowned; White-throated and Chipping Sparrows, as well as of other spring visitors—the Golden-winged Woodpecker; the Hermit Thrush; the Veery; the Red-start, the Red-eyed Flycatcher &c.

J. M. LEMOINE.

Spencer Grange, 20 May, 1882.

DEAR SIR,—In the last number of your valuable paper, I notice a letter from Mr. R. Rowe. As I take a great interest in Ornithology, and know how very important it is, that all information on this subject should be thoroughly reliable, I take the liberty of correcting an error in Mr. Rowe's notes, as I feel it a duty I owe to others interested who may be misled by it. He says a fine female Trumpeter Swan (*Cygnus buccinator*, Rich) was shot near this city; the bird referred to by Mr. Rowe was shot by Mr. Barnhill, and mounted by Mr. Carnall, and is now on exhibition for a short time, in the rooms of the Natural History Society of this city, where I have had the pleasure of examining it, and pronounce it to be the American or Whistling Swan (*C. Americanus*, Sharpless); the yellow spot showing distinctly in front of eye; tail composed of twenty feathers; nostril far forward. The interior extremity more forward than half the commissure; wing measuring twenty-one inches; bill four and a quarter. These facts I think are sufficient to convince any one who has studied the differences of the two species, of the identity of this bird, and I think Mr. Rowe will also be convinced if he will examine it again more closely. Mr. Barnhill prizes this bird very highly as it is the only instance of which I can learn of one having been captured in this Province. Can any of your readers inform me of any having been taken in New Brunswick or Nova Scotia? Would Mr. Rowe kindly inform us, in what part of the Province the flights of Cross-bills to which he refers, been seen? If in the vicinity of St. John? and during what month? I cannot learn of anyone else who has seen them near here, as I myself and several of my friends have made special excursions in search of these birds and their nests, and have not been successful in seeing more than an occasional straggler. During the winter of 1879 and 1880 the White-winged Cross-bill (*Loxia*

leucoptera) was particularly abundant; during a two hours tramp, I secured sixteen beautiful specimens and could have secured as many more had I been desirous of so doing. The common Redpoll (*Aegiothus linaria*) and Pine Finch (*Carisomitis Pinus*) were also very abundant during the same winter, when the woods were made quite lively by the combined songs of these birds; by the middle of April they had all disappeared, and have not been as abundant since, the Cross-bills only appearing in straggling pairs, while an occasional flock of Redpolls have put in an appearance round the farm yards. I have never observed the Red Cross-bill (*Loxia curvirostra Americana*) during the winter months; I shot a pair in July 1879, and have frequently seen them late in the fall in large flocks.

HAROLD GILBERT.

St. John, N.B., May 17, 1882.

PICKERING'S TREE FROG.

(*Hyla Pickeringii*)

This little Tree Frog is usually the first of its class to hail the coming of Spring. It sends out a peculiar crepitant sound, strongly resembling a cricket, hence it is sometimes called "Cricket Frog." It is a true Tree Frog; the extremities of its toes and fingers have round sponge-like protuberances supplied with viscid matter to help it to adhere to anything perpendicular. It is at ease on a sheet of glass, and when confined in a glass vase containing water, it can climb up and remain on the surface of the glass for a long time, perfectly motionless, as if asleep. This cannot be done by a common frog, as it is not provided with glutinous exudation. *Hyla Pickeringii* belongs to the order ANURA, or tailless batrachians. The *Hylidae* are arboreal in summer; they are small frogs having remarkable power of emitting loud and hoarse notes. The ear is fully developed and the family is represented in many portions of this earth. It is toothless; the toes are webbed; the skin more or less warty; under portions of body crowded with small papillae exuding a viscous fluid. Each toe and finger has a dilated spongy disk enabling it to cling to anything that it leaps on, and it relies on the papillae to secure its position on a leaf or branch of a tree. The toes are certainly used, but not in the manner of other frogs. Its back is reddish-brown with stripes resembling St. Andrews cross. A triangular mark on the

head between the eyes. Irides golden hazel. External surface of legs and arms spotted or banded or irregularly striped. Abdomen yellowish white. A dark strip from the nostrils passes through the eye, over shoulders and half way down the side. Throat more or less brown, generally wrinkled under the tongue and fauces. Tongue bifid behind. Beneath the tongue there is a small opening at each side, and these unite at the entrance into the sublingual sack. When making its crepitant croak, this sack is distended in the shape of a small orange, and rapidly emptied, forcing the wind over the edges against the palate and through the nostrils. By this means the peculiar noise is produced. This species breeds early, depositing its spawn in water, very soon after the ice disappears. I have heard its notes at one end of a small pool when the other end was glazed over with ice, and when the temperature of the water was 33° Fahrenheit. It is a difficult matter to discover this little frog when it sounds its note and if man approaches, no matter how careful, the least motion causes it to be still. It protrudes half of its head over the surface of the water, and in calm sunshiny days, a gentle thrill of wavelets may be noticed around its tiny head. But the moment that it sees anything in motion approaching or passing, its sack suddenly collapses, the tiny head sinks, and Mr. Frog goes noiselessly to the bottom, without leaving the slightest ruffle on the surface of the water. It drops down among the mud and decayed herbage without any effort to bury its body. Its imitative powers are so great that the spot in which it hides itself cannot be seen; the colour of its body being almost like the mud, &c., and spots or stripings have a tendency to make it more obscure. Regarding its note (which is powerful in proportion to its size) it may be heard on a calm spring evening, at a distance of a mile. Its weight is about thirty grains or half a drachm, therefore an ordinary sized man of 155 lbs. weight is 32,720 times larger than this little vocalist. Now suppose a man gifted with the same proportional vocal power, stood anywhere on the equator, raising his voice aloud, the sound would go round the whole world, and lap over its point of starting 8,720 miles. This illustrates an amazing power of producing sound, and it is well that our atmosphere resists and modifies sound in accordance with natural laws, otherwise the surface of the world would become a continual

din. There is another fact that I have often observed in reference to the notes of this frog, that is, its power of reverberation, seeming as if produced by ventriloquism. I have frequently stood motionless near the edge of a pool or swamp, hidden perhaps by a root or an upturned tree, listening to a score of these vocalists in full chorus, as if each endeavoured to drown the sound of its neighbour, and although I looked with great care, I could not see one individual. I have often searched with my eye for some particular *Hyla*, as far as my vision permitted, and the sound reverberated in my ears, as if the animal was ten or fifteen yards away, while in fact it was actually at my feet. One warm day at the end of April, 1880, I was collecting on the banks of a large pool in the bush. Suddenly I heard a single *Hyla Pickeringii* several yards away, and as I was anxious for some exchanges, I went cautiously to the spot. As I arrived, the same tone of note resounded from the very spot I had left. Returning again, it sounded from an opposite quarter, and, thither I followed the sound as if in mockery, in the very spot I had just left. I proceeded with more caution than before, and after a short time, the sound proceeded from a limb some distance above me. I happened to cast my eye on a fly that rested on a twig about four feet from me, thus by mere accident I discovered a *Hyla* perched on a dead branch. I stood motionless, intently watching it and presently I saw its little pouch distend, and the notes follow, but I could not tell from what quarter, had not my eye detected the musician; my ears led me astray, indeed, they failed to assist me to the true locality from which the sound proceeded. This power of reverberation or ventriloquism, call it what we may, is possessed by no other species to the same extent. It is comparatively easy to trace any other frog by its notes. I saw the spawn this season on the 4th of April, but this year has been exceptionally early. This frog seeks its food on herbage, but seldom climbs to a great distance from the earth. On opening the stomachs of several, I have found Aphides, small beetles and other insects, and on one occasion, a small earth-worm. This frog is seldom seen in daytime; it is more of a night feeder. In the nesting season, the note differs little from that of any other period, and the name given to this sound, is most admirably expressed in French by *chant amour*. The following measurements of a

dozen adult specimens taken carefully and added together, and divided by twelve, gives a very fair average of the normal size:—Length of apex of nose to end of longest toe, $2\frac{3}{4}$ inches; breadth of body, 9-16 in.; length of body from nose to tail, 1 3-16 in.; length of skull, $\frac{1}{2}$ in.; breadth of skull, 6-16 in.; length of leg from hip joint to end of longest toe, 1 10-16 in.; length of thigh, 7-16 in.; length of leg $\frac{1}{2}$ in.; length of foot 12-16 in.; length of arm to end of longest finger, 10-16 in.; length of arm, $2\frac{1}{4}$ -16 in.; length of fore arm, $3\frac{1}{2}$ -16 in.; length of hand, 4-16 in.; length of nostril to corner of mouth, 4-16 in.; diameter of ear, 1-16 in.; length of second finger, 3-16 in.; length of third finger, 12-16 in.; breadth of lower jaw, $6\frac{1}{2}$ -16 in. In spring it is generally found in pools, and in the autumn it buries itself in moist or muddy localities where it hibernates, and the place may be covered with several inches or feet of water. It is frequently found under leaves in moist wooded spots, and when the leaves are removed from its back, it remains perfectly motionless, and it then represents the shape and colour of a dead birch leaf. Although numerous they are not easily captured. They are comparatively still in day-time, but as night approaches, the sounds from the numerous throats are truly deafening. In this locality it is popularly named "The Canada Band." With them are associated the Wood Frog and the *Acris gryllus* var. *crepitans*; also a Cricket Frog, which has more of a singing note, and in fact very difficult at times to distinguish from it; even on close inspection. The *ova* is deposited in April, and I have obtained the young in perfect form in June. This is a rapid completion of its early stages, but it is slow when compared with some species found in Arizona and New Mexico, which deposit their *ova* in pools formed by spring rains, and before these pools have had time to dry, the young come forth fully formed. *Hyla Pickeringii* has the power of mimicking colour, and it is not uncommon when first taken to be of a light yellow or slightly brownish yellow colour, and when placed in a vase with dark moss, it will, in a day or two become a deep coppery brown. I have observed this frequently and am unable to account for it. If volition has to do with it, the animal would change suddenly. But it requires several days to produce this in confinement, consequently I presume it must be as slow in freedom. In summer I have seen the young of a greenish tinge, among low

herbage, and when these are kept a few days, they become of a coppery tinge or yellowish brown. It appears to me, then, that the subcutaneous pigment may be deposited in greater quantity when surrounded by dark colours, and that light colours have the power of causing sympathy or exciting influence, either of absorption or diminishing excess of shade. The subject is too intricate to discuss at present. I have taken the measurements with care and am able to state that they approach as nearly to the exact thing as possible.

J. H. GARNIER.

Lucknow, Ont., June, 1882.

GAME LAWS FOR THE PROVINCE OF QUEBEC.

MOOSE, DEER, ELK, CARIBOU, &c.

1. The hunting or taking of moose, before the first of September in the year one thousand eight hundred and eighty-three, is forbidden, and, after the expiration of that period, between the first day of February and the first day of September in every subsequent year: the hunting, taking or killing of elk, caribou, deer or their fawn, is also prohibited between the first day of February and the first day of September in each year.

Beaver, Mink, Otter, Marten, Pekan, Wild-cat, Hare, Musk-rat.

2. It is forbidden to hunt or trap:

1. Any beaver, mink, otter, marten, pekan or wild-cat between the fifteenth day of March and the first day of November, in each year;

2. Any hare, between the first day of March and the first day of November, in each year;

3. Any musk-rat, between the first day of June in each year and the first of April of the year following, in the districts of Quebec, Saguenay, Chicoutimi, Montmagny, Kamouraska, Rimouski, Gaspé, and between the first day of May in each year and the first day of April following in the remainder of the province.

Partridge, Grouse, Ptarmigan, Woodcock, Sand-lark, Wild duck, Widgeon, and Teal, &c. &c.

3. It is also forbidden to hunt or take:

a. Any partridge between the first day of January and the fifteenth of September, in each year;

b. Any grouse, ptarmigan, woodcock, snipe, or sand-lark, between the first day of February and the first day of September, in each year;

c. Any wild swan, wild goose, Canada goose, or wild duck of any kind, widgeon or teal, between the fifteenth day of April and the first day of September, in each year;

d. Any of the birds mentioned in paragraphs b and c of this section, at any time between one hour after sunset and one hour before sunrise;

2. To disturb, injure, or gather or take, at any time, the eggs of any species of wild fowl mentioned in this section, and all vessels or boats employed in disturbing, gathering or taking the eggs of any species of the aforesaid wild fowl, may, as well as the eggs be confiscated and sold.

Nevertheless, in that portion of the province to the east and north of the counties of Montmorency and Montmagny, the inhabitants may, at any time, and only for the purpose of procuring food, shoot or take the birds mentioned in paragraph c of this section.

4. It is forbidden to take, at any time, by means of ropes, snares, springs, cages, nets, pits or traps of any kind, any of the animals or birds mentioned in sections 1 and 3, except partridges; and to place, construct, erect or set, either wholly or in part, any engine for such purpose, and any person finding any engine so placed, constructed, erected or set, may take possession of or destroy the same.

INSECTIVOROUS OR OTHER BIRDS BENEFICIAL TO AGRICULTURE &C.

5. It is forbidden, between the first day of March and the first day of September, in any year, to shoot, kill or take, with the intention of killing, by means of nets, traps, springs, snares, cages or otherwise, any barn swallow, bank swallow, martin or chimney swallow, king-bird, warbler, flycatcher, woodpecker, whippoorwill, song-sparrow, titmouse, goldfinch, grive, cow-bunting, bobolink, (*dolichornix oryzivorus*), sparrow, jay, grackle, grosbeak, and all other species of birds, with respect to which no provision has been made in any of the preceding sections, or to take their nests or eggs, except eagles, falcons, hawks and other birds of the eagle kind, wild pigeons, fishers, crows and ravens, waxwings (*recollets*), and the great northern shrike (*Collyrio borealis*).

This section does not, however, apply to the birds commonly known as poultry.

6. It is forbidden to take or kill migratory quail up to the thirty first of December, one thousand eight hundred and eighty-four.

GENERAL PROVISIONS.

7. It is forbidden, at all times, to use or employ strychnine or other deleterious poison, either mineral or vegetable, or any spring-gun, to hunt, take or destroy any animal what ever.

8. Every game-keeper, under the control of the Commissioner of Crown Lands, shall forthwith seize all animals or birds mentioned in the preceding sections,—except section 5,—or any portion of such animals or birds found by him in the possession or custody of any person during any forbidden period and which appear to him to have been taken or killed during such period or by any of the illegal means set forth in sections 4 and 7 of this act; and bring them before any justice of the peace who shall declare them confiscated, either in whole or in part. All animals or birds or portions of animals or birds so confiscated belong to the game-keeper.

9. It is forbidden to have in one's possession, custody or care, any animal or bird already mentioned,—except those with respect to which provision is otherwise made in section 5 of this act,—or any part of such animal or bird, with the exception of the skin, during the period in which the act of killing the same is prohibited, by this act, or which appears to have been killed or taken by any of the means forbidden by this act; but every such animal or bird, or any portion or portions thereof, may be bought or sold, when lawfully taken, during five days to be computed from the expiration of the various periods respectively fixed by this act for the taking or killing thereof.

10. Every game-keeper, under the control of the Commissioner of Crown Lands, may cause to be opened or may himself open, in case of refusal, any bag, parcel, chest, box, trunk or other receptacle, (outside the limits mentioned in the following section,) in which he has reason to believe that game, killed or taken during the close season, or peltries out of season, are hidden.

11. Every gamekeeper appointed by the Commissioner of Crown Lands, if he has reason to suspect, and if he suspects that game, killed or taken during the close season, or peltries out of season, are contained or kept in any private house, store, shed or other buildings, shall make a deposition before a justice of the peace, and demand a search warrant to search such store, private house, shed or other

building and thereupon such justice of the peace is bound to issue a warrant.

PENALTIES, PROCEEDINGS, &c.

12. Every infringement of any of the provisions of this act is punishable by fine, to be recovered summarily on information or only on a writ of summons issued by a justice of the peace.

The fines are as follows: For every infringement of

Section 1.....	\$5 to \$20
Sections 2 and 3.....	5 to 15
Section 4.....	2 to 10
Sections 5 and 6.....	2 to 6
Section 7.....	25 to 50
Section 9.....	5 to 20
Section 17 (double the fee for the game license)..	
Section 19.....	5 to 10

Such justice of the peace, shall, if he finds the proof sufficient, impose the fine with costs, which fine wholly belongs to the prosecutor, if he be a game-keeper, and one half only if he does not act in an official capacity; in the latter case the other half is paid over to the game-keeper, appointed for the division by the Commissioner of Crown Lands, to be by him forwarded to the Crown Lands' Department.

In default of immediate payment, the offender is imprisoned in the common gaol of the district within the limits of which the offence was committed, for any period of time not exceeding three months, and in cases of infringement of section seven, for a period not exceeding six months.

Every justice of the peace has power to convict on view.

Prosecutions are at the risk and costs of the complainant.

13. Suits brought in virtue of this act need not be begun by deposition, or information or oath of the plaintiff or complainant, provided that the purport of the complaint or demand is sufficiently set forth in the writ or in a declaration annexed thereto.

The evidence of the complainant alone or of any one witness is sufficient to justify a conviction.

14. No proceeding under this act shall be quashed, annulled or set aside by *certiorari*; but an appeal may be brought before the Circuit Court of the district in which the offence took place, in the same manner as appeals under the municipal code.

15. No prosecution shall be brought after

six calendar months from the day of the committing of the offence charged.

APPOINTMENTS, GAME LICENSES, &c.

16. The Commissioner of Crown Lands has the power of appointing officers to see to the observance of this act and of any other act which may hereafter be passed relating to game in this province.

17. In future, no person who has no domicile in the province of Quebec can, at any time, hunt within the meaning of this act, without being authorized thereto by a license to that effect.

18. Such permit may, upon payment of a fee of twenty dollars, be granted by the Commissioner of Crown Lands to any person, not domiciled in the province, who applies to him therefor, and shall be valid for the whole of one season's shooting. It must be countersigned by the game superintendent.

19. The Commissioner of Crown Lands may grant written permits to any person or persons who may be desirous of obtaining birds, eggs or fur-bearing animals for *bona fide* scientific purposes, to procure them for that purpose during the close season, and such permits shall be countersigned by the game superintendent; and the person, who shall have obtained such permit, shall not be liable to any penalty under this act, provided he sends in, within two months from the date at which he acted under such permit, a statement showing the species and number of the game or fur-bearing animals he so procured for scientific purposes.

20. Every wood-ranger, appointed by the Commissioner of Crown Lands, is while in office as such, *ex-officio* gamekeeper for the division under his superintendence and he is not entitled to any additional salary for such services.

21. The Commissioner of Crown Lands may also appoint as game-keepers, any other persons besides the wood-rangers and assign to them such territory or division as he may think proper under the circumstances.

22. The lieutenant-governor in council may in his discretion prohibit the hunting or killing of any game or fur-bearing animal, for a period not exceeding five years.

23. The present act shall come into force on the day of its sanction.

NOTE.—In our next issue, we will make some further comments on the above.

THE CANADIAN SPORTSMAN AND NATURALIST.

No. 7.

MONTREAL, JULY, 1882.

VOL. II.

WILLIAM COUPER, Editor.

CANADIAN FOOD FISHES—NEGLECTED SPECIES.

Large quantities of preserved fish commonly called Sardines are sent to this Dominion from Europe. The Canadian consumption of this article must be enormous, while the purchasers are ignorant of what they are buying, and we may as well tell them that in many cases they are not eating the genuine Sardine, but the posterior portion of herring (*Clupea*.) Years back there was a possibility of obtaining the true Sardine, but to-day few fish of the kind are packed for our market. We have to take an inferior article—a fish densely covered with large scales and with only a remote flavour of the Sardine. We know of a better fish in the Gulf of St. Lawrence, occurring abundantly during the months of May, June and July, as far up the river as Baie Mille Vaches and Bic. The *habitants* take them in large quantities, which they generally salt in tinnets for the Quebec market, but unfortunately this Canadian Sardine is extremely delicate and the primitive mode of preserving make the fish too salt; they are therefore not generally relished. If, however, the Sardine of the St. Lawrence, could be put up in oil in fair-sized tins, there is reason to think it would be equal, possibly superior to the supposed Italian fish sent to us by the name of *Sardines a la huile*. We have an advantage also of claiming this fish as local to our marine *fauna*—that is to say, they occur in great schools in the Lower St. Lawrence, while they are scarcely ever seen in the salt waters bordering the United States. This is an advantage. Doubtless the presence of this delicate fish in the Gulf, is to a great extent the cause for the appearance of numbers of whales and seals in these waters during summer. Here, then, is plenty of material to open a new industry, which in our opinion would be remunerative,

if a few energetic men take it in hand. We are astonished that this pretty, delicate fish has been so long neglected, and the subject is now brought before the Canadian public for the first time, to show that there are disregarded though available industries in the Dominion.

There is another little fish, also extremely prolific in the same waters—i.e., the Caplin. When this fish is properly cured—and of late, the Gulf fishermen have paid some attention in curing them—it forms a healthy, fattening food. The demand at present is principally from English restaurant keepers, especially in the City of London. The present mode of curing is simple, that of allowing the fish to remain in salt for a short time and then laid out in the sun to dry. It may be said that Caplin preserved in this way are sun cooked. We can vouch for this, as they formed a delicious morsel with a biscuit and coffee at breakfast daily for three weeks on our second trip to Labrador. One painful purchased for 25 cents, served to give a relish to the morning meal during the latter time. In these times, when all kinds of human food is dear, it is necessary that some attention should be directed to neglected material which could be converted into good, strengthening, easily digested food for mankind. Now that we have made important remarks regarding the above species of marine food fishes, we wish to bring before our readers two species of fresh-water fishes, which, by some persons, are considered excellent human food, when properly cooked. The common Cat-fish and the large Channel Cat-fish are found throughout the Provinces of Ontario and Quebec; the former common throughout Ontario, and the latter uncommon in Quebec. It seems that delicate and refined people have a prejudice against eating these fishes, but we can dispel such notions from the fact that some scientists have classed them near the Genus *Salmonidae*. The Cat-fish being forms occurring on this continent, approaching the latter by having the lateral and posterior portions of their bodies resembling Salmon. They have the adipose fin; the tail portion certainly resembles some species of *Salmonidae*. With regard to our own experience, we have cooked

Cat-fish in various ways, but the perfect mode of obtaining the flavour of the common Cat-fish is to pot them; they constitute the best fresh-water fish on this continent for potting, and their flavour is not far removed from Salmon. We rely therefore on the gist of our remarks being looked into; that we may see the Sardine of the Lower St. Lawrence put up in genuine olive oil; the pretty Caplin sold by our grocers, as sun-cooked fish, and the Cat-fishes of our fresh waters potted in such style that the strong prejudice formerly held against them may be forever removed.—C.

THE QUEBEC GAME LAWS.

It is strange, after the many changes or alterations made in the Game Laws since they were first framed for this portion of the Dominion, that they are now imperfect. The Commissioner of Crown Lands has adopted an ornithological nomenclature peculiarly his own, as we cannot determine his "Sand-lark," and question if any one else can. Suffice to say that no bird of the name is known on this Continent. Section 5 of the Act is a perfect jumble, for we find the Grakles, Grosteaks and Cow-bunting classed as insectivorous, while the (wax-wings) Cedar-bird is ordered to be destroyed. The Sparrow, which we suppose to mean the introduced European species is classed as an insect-eating bird, merely by chance because it has changed much of its old country habits in this climate. Only the other day, a motion was made by one of our Montreal City fathers devising means to destroy the House Sparrows, which are said to be a nuisance. But the mover and seconder of the idea forgot that an Act was passed by the Quebec Legislature protecting the Sparrow, and as soon as they gave the order to the Road Committee and they commenced to destroy them, Inspector Gailey could pounce upon these gentlemen, when according to law, they would be fined or go to jail. In connection with Section 5, a paragraph occurs which appears to us to have been placed there as a joke, as we cannot see what "poultry" or domestic fowl have to do with

the wild birds of the forest; however he who shoots a barn-yard fowl to bag it instead of a Whip-poor-will is a knave when he pleads ignorance of difference between the two birds. To show the confusion in this Game Law, it says that "it is forbidden to hunt or take (a) any Partridge between the first day of January and the *fifteenth of September* in each year;" and (b) any Grouse or Ptarmigan between the first of February and the first of September in each year." The poorest tyro sportsman in Canada possesses some knowledge of the birds classed as game, and when the Ruffed Grouse is called a Partridge, he knows that the name is vulgarly used. Suffice to say that we have no Partridge in Canada, (unless they have been lately introduced from Europe or some other country without our knowledge). The birds of this class called game—i.e., the Ruffed Grouse, Spruce Grouse and Ptarmigan are true American representatives of forms known to ornithologists as Grouse. Now, as stated above, a man may shoot Ruffed Grouse on the 16th of September and in accordance with the correct nomenclature of the bird, backed by scientific evidence, he can defy any Provincial Magistrate to fine him for doing so. We are displeased with this amended Game Law, and the hurried manner in which it was passed to the Statute-book. The matter should have been placed in the hands of a competent naturalist—one who professes to know something of the animals referred to;—A course of this kind would avoid criticism and the Statute would not then be paradoxical to legal men or magistrates. We wish some of our sportsmen would give us their opinions on these Game Laws; our object being to arrive at their correct framing.—C.

THE SAW-WHET OWL.

The melanic form of this little owl is rare. A beautiful specimen was sent to us on the 21st inst. from Ontario. In days of yore, the variety was not properly known; its dark colouring would at that time lead an ornithologist to describe it as a new species. A want of knowledge of this bird led to the description of the White-fronted or Kirtland's owl, but now it is known that we have only two distinct species of small northern owls—i.e., Richardson's and the Saw-whet, both of which appear in distinct dresses during summer and winter.—C.

Correspondence.

NEST HUNTING.

SIR,—Recent communications which I received from Canadian and American Ornithologists leads me to think that former articles in your Journal have been read with interest; I think it may also be interesting to our Ornithological friends to make a few remarks regarding birds observed, and nests discovered during the present season. On the 24th of May, I was fortunate to discover the nest, and secure therefrom, a set of the eggs of the Pigeon Hawk, (*Falco columbarius*). This bird is rather rare in these parts of Canada where I have pursued my Ornithological researches; in fact, with the exception of the Red-tail, commonly called the Kite, or Chicken Hawk, none of this tribe are numerous in this region. Last summer, I noticed one of these hawks capture a pigeon in my garden; it flew with its victim towards a cedar swamp north of this town, where in April last I noticed several old nests which I supposed belonged to this species, or some of the hawk family. This led me to believe that the locality was a favourite nesting place of these birds, and I determined to revisit it later in the season. Accordingly on the above date, in company with my oldest son, I was again among the cedars. In the midst of a thick growth of evergreens, chiefly balsam and cedar, I discovered in a cedar tree, about forty feet from the ground, a new-made nest, from which upon throwing up a stick, I had the pleasure to start a hawk; and upon her return with her mate, I saw it was *Falco columbarius*, and these by their notes intimated that they regarded my presence as dangerous to their long undisturbed safety. To reach the nest was a work of considerable difficulty; I was not an expert climber, and a fall might be fatal. Having a shingling axe and some nails with me, I first made a rude ladder, about fourteen feet long; this brought me to the lower branches, whence I had to cut a number of small limbs as I progressed upward. In a short time, however, I found myself in reach of the nest, which was placed on several branches, close to the trunk of the tree, and formed of small dry sticks and bramble. In the slight hollow I found four eggs, which I soon transferred to my collect-

ing-box, and with them descended in safety to the ground, rejoicing over my prize—the first eggs of any of our Birds of Prey that I had yet secured—and which, though incubation had progressed several days, I found no difficulty in preparing, and placing at the head of my collection. The general colour of these eggs are white, variously marked by different shades of brown. No two of them are similarly marked, nor of a uniform size; two of them are almost round, being 3.5-8 x 3.3 inches in circumference. One is 3.3 x 4, the other which is more oblong, is 4 x 3.3. One of the round eggs is dark brown on one end; the more oblong one has an irregular band of a similar hue towards the centre; another is banded and blotched over the middle, and another which has less colouring than the rest, has its darkest shade on one side. Vennor, in "Our Birds of Prey," pages 11 and 16, describes this bird, but it seems that he was not acquainted with its nidification. On the 5th of April, I observed three pair of a species of hawk, new to me; they were moving westward, being at an elevation of several hundred feet, and seemed to be going through a regular waltzing gyration. The colour appeared to be greyish white; the body neat and slender and about the length of the Pigeon Hawk; the wings long and curving sometimes flapped, and again spread out as they circled round after the manner of the Red-tail. Again, on the 25th of the same month, about three miles east of this town, I observed at about an equal elevation, six birds similar to those seen on the 5th, going through similar evolutions, but moving in an opposite direction. Their notes which I heard on this occasion, at first sounded like those of the wild goose, but ended in a call similar in tone, but less loud than that of the Red-tailed Hawk. Perhaps these were the Broad-winged Buzzard. Robins are numerous here, this season, and many of their nests have been observed. The Blue Bird is now becoming scarce, I have not seen its eggs this season yet. It first made its appearance here on the second of March. The Crow-black birds are very numerous, nesting in the balsam shade-trees in the town, and in the willows and small cedars in the beaver meadows as well as the deserted holes of Hiholders, and hollows of trees. I have taken over a dozen sets of their eggs this month. The Northern Shrike (?) is becoming more common. On May 3rd, I collected from a nest in a

thorn bush by the road-side, six eggs, and on the 6th, from another nest in a small balsam, a set of seven eggs; another set of six, was collected on the 20th near the former place. I will not trespass on your space, further at present but will continue this subject another month.

WM. L. KELLS.

Listowel, May 29th, 1882.

TIT LARK.

(*Anthus ludovicianus*.)

I recollect having found the nests of these birds on a Common near Galt, Ont. They were placed in a hollow in the ground just large enough to contain the nest. The place selected was always on a hillock or rise in the ground. I often wondered they were not destroyed by the cows, that fed over the common, stepping on them, as they were so exposed. I have seen them with eggs and with the brood. The young are little, grey, fuzzy-headed fellows. The eggs were not unlike the cow-buntings. I think it was in May I found them. Of this or the appearance of the eggs I am not certain, as it is several years since I saw them.

CHAS. J. G. FRASER.

Punta Rassa, Florida,

FISHING AT ST. ANN'S.

The fishing at St. Ann's this season as elsewhere, especially in the Ottawa, is later than usual, owing to the high water and continued cold, bleak north and east winds. Occasionally however, there was a warm balmy day, one of these days that a fisherman "sees game" and if so situated as to be able to take his rod, boat and a few white minnows at the "biting hours" and quietly slipping his anchor in the lee of a point, or in the eddy between two currents, he will not wait long before there is the gentle nibble, then the whiz of the reel, and a good fish is hooked. On such a day last month, a gentleman of Montreal, residing at St. Ann's for the summer succeeded in taking three black bass, weighing respectively $3\frac{1}{2}$, $4\frac{1}{4}$ and $5\frac{1}{2}$ lbs. in an eddy, and on a similar occasion, while trolling with the rod, struck a maskalonge weighing 35 lbs., and again another weighing 15 lbs. The

bait used was a white phantom minnow. To take a maskalonge on the rod, is the highest ambition of most of our local fishermen, but many are lost in the capture, the cause being chiefly defect in tackle or bad management on the part of the boatman. We are informed that $5\frac{1}{2}$ lb. black bass are scarcer at St. Ann's than large sized maskalonge, and as much if not more careful play is necessary to kill the former than the latter. For a good day's fishing, we know of no better place than St. Ann's in the immediate vicinity of which there is excellent fishing, and it is midway between Lakes St. Louis and Two Mountains. Mine host Routhier of the Clarendon, the fishermen's quarters will furnish boats and boatmen if notified in season.

SPELL MASKINONGE.

Montreal, June 27.

BALD EAGLE.

(*Haliaeetus leucocephalus*.)

I made enquiry of Messrs. Howard & Kennedy, who have been collecting ornithological specimens on this coast, for six years or more, and they say they have never seen a Gray Eagle paired with a Bald. During this time on the coast, they have probably seen fifty nests, and both Eagles were similar in their markings. I found a nest a few weeks ago; it was in the top of a tall black mangrove. I visited it several times and always found an Eagle with white head and tail on the nest. I removed the eggs and placed them in an ant-hill to be cleaned; though they were protected by a box and boards, a Raccoon dug under everything and destroyed them.

CHAS. J. G. FRASER.

Punta Rassa Florida,

24th May, 1882.

NOTE.—The *Anthus* referred to by our correspondent, is doubtless the Tit-lark. He says, "it has a very sweet note and sings as it rises in its flight. It mounts to a height of perhaps fifty feet, then suddenly closing its wings drops towards the ground as if it was shot. The nests of this Lark were found near Galt, about fifteen years ago."

We think there is no duty on objects of Natural History, brought to Canada from the United States. The specimens being for your private study.—C.

THE BIRDS OF PREY OF NOVA SCOTIA.

BY J. BERNARD GILPIN, A.B., M.D., M.R.C.S.

These markings do not accord with the bright chestnut red with no bars, of ours, excepting the broad subterminal one. At the same time, Mr. Downs kept in confinement for several years a pair of red-tails which always kept the brownish bars on brownish red-tails, resembling Richardson's. Thus we have this buzzard in two forms. The warm southern form of Wilson and the paler arctic one of Richardson. The specimens in the Halifax Museum and private collections are all young birds, but agree exactly to Richardson's description in bill, length of primaries and legs and feet. I kept one of the southern forms in confinement for several years. The second year he lost the brown tail of the immature bird and developed a bright chestnut one. I fed him upon livers and raw meat, which he received on his bill, but immediately transferred to his feet, tearing it, from which he fed. On giving him a dead bird he instantly became excited, spreading out his wings and tail and bending over it, with erect crest and head plumage, as it was fixed to his perch by his claws. He usually tore the sides open, thrusting in his hooked bill and drawing out the intestines. His blood stained bill and feathers, with his continuous, guttural, angry cries, and piercing eye underneath its bony brow, showed for the time he was no poor captive tied with a string. The fish hawk (*P. haliaetus*) stands out from the family so broadly that he almost deserves a family alone. Eagles are admitted carrion eaters, and there are ugly stories told about the noblest falcon, of preying on vermin and dead animals. He, of all, kills his prey. Should he drop a fish from his claws, his instincts are never to pick it up. His limbs are muscular to the extreme, scarcely covered by the shortest feathers, and his legs and claws immense for his size; the joints are so loose in their articulation as to have a side motion, and the toes so adjusted that they may work in pairs, like the parrots, two before and two behind; the proper hind toe small, in this particular approaching the owl. The very peculiar scales they are covered with, and the roughness of the sole, still further recedes it from the typical foot of the *FALCONIDÆ*. They breed in our forest some miles from the sea, but do not winter with us. He may be seen regularly hunting our estuaries and forest lakes. Now

gracefully soaring, and now falling prone as a stone into the water, and then emerging with a fish in his claws, heavily laden and seeking the forest. I never could observe if he went beneath the water, as everything was covered by the splash of water caused by his fall. It is asserted that he does, by men of science and by the practical observer. It must be a very powerful bird to rise loaded from beneath the wave. The rising sun caught me amongst the hills of St. Clements, one morning after a long night ride. The air was filled by dismal screeches, and I nearly broke my back twisting in my saddle till I saw right over my head a fish hawk heavily laden with a fish in his claws and a bald-headed eagle continually soaring above and pouncing down upon his back. In a moment the fish came diagonally falling, the level beams of the early sun glinting it with silver. The eagle dropt like a stone beneath it, catching it on its upturned claws, and flapped away, whilst the poor plundered hawk was heard screaming long after out of sight. The eagles are the last upon our list. The golden eagle (*A. chrysaetus*), the eagle of the ancients, the bird of Jove, remains the whole year, and nests with us. They are more rare than the bald-heads, a pair dominating over a very wide country. I have seen four, three of them alive, taken in traps, the fourth killed by a woman in Pictou County. One in captivity was a very bold bird, attacking everybody that approached him with his claws. This attack was so fierce that a calfskin boot would have soon been torn from your foot. The bold grandeur of its massive head, supported by a neck arched like a horse and adorned by shining and golden hackles, imposed itself upon you as the type of force and pride; and yet he was trapped. He was seeking dead meat, which he devours as well as carrion. In beauty and severity of expression he far surpasses the bald-head (*F. leucocephalus*), the only other eagle we have. Though he will eat carrion, and gorge himself over the carcass of a dead horse: though he will enter your gardens, and strike a pea fowl or Brahma pullet: yet he adds dead and stranded fish to his larder. Hence his abundance, and his fatness. He remains all year with us, especially about the shores of the Bay of Fundy, building his nest sometimes in trees, at other times on scraggy rocks. As usual, the perfect adults with milk-white tail and head are few in comparison with the brown and spotted white young,

and what is singular those young are larger in their dimensions than the adults. I have known them six inches longer than old male adults. An immature bird shot near Halifax, in January, 1855, measured nearly eighteen feet wing spread, with tail of sixteen inches. He was shot rising from the carcase of a dead horse upon which he had gorged himself. These dimensions exceed the dimensions of the supposed Washington eagle. In studying many specimens, both adults and young, as regards scutellation of tarsus, I found them to vary so much, not only among individuals but in the individual itself, in number, as to be of no use as a typical mark. Audubon makes it a differential mark in the Washington eagle. An eagle about two weeks old, now in Halifax Museum, has twelve on tarsus and twenty on middle toe. The legs of an adult, shot at Digby, 1880, and mounted as candlesticks, has none upon tarsus. One must conclude that they are shed and renewed. In all my examinations of grey or spotted white and brown specimens, I have never seen any but what were the young of the bald. In the list of rapacious birds I have presented to the Institute as inhabiting Nova Scotia, identified by myself or friends, we find that with the exception of the Screech owl (*S. asio*), we have all the New England species of owls as visitants or residents, and this as a rather remarkable exception, as being abundant in New England and Newfoundland, and migratory. Owls are a peculiarly forest family, and our still remaining pine spruce forests, our barrens and lake country, give them shelter and food. The Great Horned owl, (*B. Virginianus*) the Barred owl (*S. nebulosum*), the Long and Short-eared owls (*O. vulgaris* and *B. palustris*), and the Saw-whet (*N. Acadica*) are resident, breeding with us, their nests and young having been taken, or they themselves having been seen during all periods of the year. The more arctic species are our winter visitants, breeding and nesting to the far north. The Great Grey owl (*S. lapponicum*) is a very rare visitant. The Snow owl (*Nyctea nivea*, and the Hawk owl *S. ulula*) appear during some winters, almost in flocks, a thing unusual for birds of prey, and showing great scarcity of food. The Saw-whet (*N. Acadica*) is seen approaching the clearings during winter, also in flocks, whilst Tengmalm's owl (*N. Tengmalmi*) is very rare. One sees them scarcely ever during the day time in our solitary forests either winter or summer.

During the night we hear them in our summer or fall camp. The fierce feline cry of the Great Horned, or the broader sounding hoots of the Barred, as well as the stridulous squeaks of the Saw-whet. Unless the hunter hides his grouse or hares he may have shot, cunningly beneath the snow, when he returns for them he will find that an unseen but watchful prowler has stripped off feathers or fur, torp and devoured them. This feeling of being watched by the unseen is one of the charms of our alpine forests. If you take your back track in early morning after coming to camp late in the evening, you will find you have been stealthily followed for many a mile by the tracks of the lynx or wild cat. During the night the foxes and the bears, nay even the moose, is warily reconnoitering the intruders, and the owls coming to the camp fire, all prowlers in the dark for what they may pick up. Of the diurnal Rapacidae, we find our Province has the usual New England species, yet there are a few noteworthy exceptions. I have never seen the Broad-winged or Pennsylvania buzzard here (*B. Pennsylvanicus*), nor the common English buzzard of Richardson (*B. vulgaris*), or the Short-winged buzzard (*B. butoides*). The kites also I have never seen. If they migrate north of us, as it seems they do, they go inland and not along the sea coast. Neither are they winter visitants. A stray Red-tail hawk (*B. borealis*) is seen during winter. But the Goshawk (*A. atricapillus*) may be called a persistent winter visitor. Specimens of him are brought to Halifax frequently at that time. He and his mate, all winter long, frequents the scrubby pines overlooking the Bay of Fundy from the North mountain, and the moose hunters have seen them feeding among the white snow upon the grouse they struck in the forest. Though this family do naturally resolve themselves into harriers, buzzards, hawks, and falcons, some pursuing live game, others pouncing upon it, others picking it from the ground, and taking lizards, frogs, and even insects, yet with the exception of the timid fish-hawk, the only one who takes his live meat, they all will descend to dead meat and carrion. The imperial eagles being the nearest in this to the vultures who never take their game alive. I have never heard of the bald-heads taking their fish alive, whilst the fish-hawk, if he drops his fish will never seek to reclaim it, seemingly having no instinct to catch fish except from the water. To him alone is due, if it is an honour, never

to sit, except to the Abyssinian banquet of quivering meat.

There are many traditions and stories of children being carried away by eagles; they are usually the traditions of former times, and of spectators and eye-witnesses long since relieved of the burden of flesh. But there is one instance which happened in Labrador, where the parties are still living. An English missionary was visiting a fisherman's family in their hut by the shore; the father of the family came stumbling in for his gun, in a most excited state he handed it to the missionary, saying, "I can't kill my own child, do your best." Gun in hand the clergyman stood upon the shore, and saw an eagle about eight feet in the air slowly rising weighted by the living child held by its clothing; he covered his bird, fired, and it dropt so gently to the ground that the child was unhurt, though the slugs by which the gun was loaded had done their work. This gentleman, the Rev. Mr. Wainwright, now holds a good position in the diocese of Honolulu, in the Pacific.

COLEOPTERA FOUND IN THE PROVINCE OF QUEBEC.

By WILLIAM COUPER.

In the Transactions of the Literary and Historical Society of Quebec for 1864-5, I published brief lists of the Coleoptera (Beetles) taken in the vicinity of the latter city, and other portions of the Province, formerly Lower Canada. Since then, through the exertions of a few local students, additional species have been added, which are here included. During the above years, L'Abbe L. Provancher was my *protege*, and I am pleased to state that in the determination to master the study, and through his subsequent publications benefit has been the result especially among the young French scholars in this Province. Considering that there are several Entomologists subscribing to this journal, I will publish the names of all the beetles so far found up to the latitude of Quebec. The species are numbered that collectors in adjoining Provinces may compare notes regarding Geographical range.

CICINDELA 1 albilabris, *Kirby*. I took this species at Lorette, north of Quebec, and at Godbout on the north shore of the St. Lawrence, in June.

2 sexguttata, *Fabr.* Generally in woods in May and June.

3 purpurea, *Olivier*.

4 vulgaris, *Say*.

5 duodecimguttata *Dej.*

6 hirticollis, *Say*.

7 limbalis, *LeConte*. I took this species at Natashkouan, on the north shore of the St. Lawrence.

8 repanda, *Dej.*

9 splendida, *Hentz*. This species is given on the authority of Mr. Caulfield, who says it occurs on the Island of Montreal.

OMOPHRON Americanum, *Dej.* Rare.

ELAPHRUS 1 ruscarius, *Dej.*

2 politus, *Lec.*

3 cicatricosus, *Lec.*

BLETHISA Julii, *Lec.* Rare.

LORICERA 1 pilicornis, *Latr.* Rare.

2 Neoscotica, *Lec.*

NEBRIA 1 castenipes, *Lec.*

2 moesta, *Lec.*

3 pallipes, *Say*. Rare.

NOTIOPHILUS confusus, *Lec.*

CLIVINA rufescens, *Dej.*

SCHIZOGENIUS lineolatus, *Say*.

APRISTUS subsulcatus, *Dej.*

BLECHRUS linearis, *Lec.*

CALOSOMA 1 calidum, *Fabr.*

2 frigidum, *Lec.*

CARABUS 1 serratus, *Say*.

2 Lapilayi, *Laporte*.

CYCHRUS LeContei, *Dej.*

DYSCHIRIUS globulosus, *Putsays*.

BRACHINUS 1 fumans, *Fabr.*

2 cordicollis, *Dej.*

3 medius, *Lec.*

LEBIA 1 atriventris, *Say*.

2 tricolor, *Say*.

3 viridis, *Say*.

4 pumila, *Dej.*

5 scapularis, *Dej.*

6 fuscata, *Lec.*

7 axillaris, *Dej.*

8 fuscata, *Dej.*

DROMIUS piceus, *Dej.* Rare.

METABLETUS Americanus, *Schaum*. Rare.

AXINOPALPUS biplagiatus, *Lec.* Rare.

CYMINDIS 1 reflexa, *Lec.*

2 pilosa, *Say*.

3 neglecta, *Haldeman*.

4 laticollis, *Say*.

CALATHUS gregarius, *Dej.*

PLATYNUS 1 pusillus, *LeConte*.

2 bicolor, "

3 sinuatus, "

4 extensicollis, *LeConte*.

5 viridis "

- 6 anchomenoides, "
 7 melanarius, "
 8 Harrisii, "
 9 limbatus, *Say*.
 10 metallescens, *LeConte*.
 11 cupripennis, "
 12 punctiformis, "
 13 excavatus, "
 14 picticornis, "
 15 nutans, "
 16 subcordatus, "
 17 ruficornis, "
 18 octopunctatus "
 19 chalceus, "
 20 placidus, "
 21 obsoletus, "
 22 picipennis, "
 23 stigmaticus, *Lec*.
 24 retractus, *Lec*.
MYAS foveatus, *Lec*.
OLISTHROPUS 1 parmesus, *Say*.
 2 micans, *Lec*.
PTEROSTICHUS 1 adoxus, *Lec*.
 2 lucublandus, *LeConte*.
 3 erythropus, "
 4 caudalis, "
 5 luctuosus, "
 6 corvinus, "
 7 patruelis, "
 8 desidiosus, "
 9 mutus, "
 10 adstrictus, *Esch*.
 11 Luczotii, *Lec*.
 12 mandibularis, *LeConte*.
 13 maucus, "
 14 stygicus, "
 15 protensus, "
 16 permandus, "
 17 honestus, "
 18 protractus, "
 19 lachrymosus, *Newm*.
 20 coracinus, "
 21 punctatissimus, *Rand*.
 22 rostratus, *Lec*.
AMARA 1 musculus, *Say*.
 2 avida, *Lec*.
 3 exarata, *Dej*.
 4 angustata, *Say*.
 5 impuncticolis, *Say*.
 6 littoralis, *Zimmerman*.
 7 fallax, *Lec*.
 8 erratica, *Strum*.
 9 laevipennis, *Kirby*.
 10 interstitialis, *Dej*.
 11 obesa, *Say*.
 12 pygmaea, *Couper*. The type of

this species is in the Laval University collection.

- 13 subaena, *Lec*.
 14 indistincta, *Mann*.
BADISTER pulchellus, *Lec*.
DICELUS 1 simplex, *Lec*.
 2 teter, *Bonelli*.
 3 politus, *Lec*.
CHLÆNIUS 1 lithophilus, *Say*.
 2 sericeus, "
 3 chlorophanus, *Dej*.
 4 Pennsylvanicus, *Say*.
 5 tricolor, *Dej*.
 6 impunctitrons, *Say*.
 7 tomentosus, *Dej*.
OODES fluviatilis, *Lec*.
SPONGOPUS verticalis, *Lec*.
AMPHASIA interstitialis, *Say*.
SELENOPHORUS granarius, *Dej*.
ANOMOGLOSSUS emarginatus, *Say*.
HAPLOCHILE pygmaea, *Lec*.
AGONODERUS 1 comma, *Fabr*.
 2 lineola, *Dej*.
 3 pallipes, "
ANISODACTYLUS 1 ellipticus, *Lec*.
 2 rusticus, *Dej*.
 3 Harrisii, *LeConte*.
 4 melanopus, "
 5 nigritta, *Dej*.
 6 discoideus, *Dej*.
 7 Baltimorensis, *ej*.
BRADYCELLUS 1 quadricollis, *LeConte*.
 2 lugubris, "
 3 cognatus, "
 4 rupestris, "
HARPALUS 1 stigmaticus, *Germ*.
 2 caliginosus, *Say*.
 3 erraticus, "
 4 vividenus, *Beauvais*.
 5 Pennsylvanicus, *LeConte*.
 6 compar, "
 7 erythropus, *Dej*.
 8 pleuriticus, *Kirby*.
 9 herbivagus, *Say*.
 10 laticeps, *LeConte*.
 11 faunus, *Say*.
 12 Lewisii, *LeConte*.
 13 varicornis, "
STENOLOPHUS 1 humilis, *Dej*.
 2 conjunctus, *LeConte*.
 3 fuliginosus, *Dej*.
PATROBUS 1 longicornis, *Say*.
 2 tenuis, *Rand*.
 3 rugicollis, "
 4 angicollis, "

THE CANADIAN SPORTSMAN AND NATURALIST.

No. 8.

MONTREAL, AUGUST, 1882.

VOL. II.

WILLIAM COUPER, Editor.

THE INTERNATIONAL FISHERIES EXHIBITION.

This Exhibition will be opened on the 1st of May, 1883, in London, England, and will remain open for a period of six months. The principal objects to be admitted are all kinds of specimens of fish-life, and to illustrate all the modes by which the Marine and Fresh-water animals of economic value are captured and utilised, together with the commercial, scientific, social, historic and legislative aspects of such fisheries.

The United States Congress have lately voted \$50,000 in order that fishing industries carried on by the American people may be properly represented. Our neighbours say that the amount invested by them for the Berlin Exhibition, was money well spent, and they are determined not to be behind in a show of this nature, especially when it is patronized by our beloved Queen and the male portion of the Royal family, also by foreign Princes and all the noblemen of the British nation. The Right Hon. Sir John A. Macdonald, K.C.B. Premier of Canada, represents our Dominion, as a Vice-President and member of the General Committee.

There is a Fisheries Department at Ottawa, and its Chief is a Council Minister; yet up to this instant, nothing has actually been done to illustrate in London next year, products from our great lakes and rivers throughout this vast Dominion. The Exhibition was in prospect months gone by, and to-day we find the men in charge of our Fisheries only commencing to procure material when the season is almost past. There are a few *pseudo* naturalists connected with the Government who seem to have all this kind of business arranged in their own way, and large sums of money is

expended from year to year on experiments that never return a cent into the Exchequer. We know that Mr. S. Wilmot of Newcastle, O. has done his share to make a successful show, but some one in the Department is to blame for procrastination and want of energy. When Mr. Wilmot exhibited his fishes at Ottawa, the Editor of this Journal competed with a collection of stuffed Food-fishes from the Province of Quebec; many of the latter species were different from those exhibited by the former gentleman. The Quebec Fish collection was offered to the Fisheries Department, at a reasonable price; the offer being made through Mr. Whitcher, who knew that the lot was a bargain, and by his request, they were packed and left in Ottawa, to await a reply from the Chief of the Department. Some days afterwards an answer was received that the Department had no money to purchase Stuffed Fishes, and the collection was brought back to Montreal, where it was immediately purchased by Dr. Sterry Hunt and presented to McGill College Museum. Mr. Wilmot endeavoured to induce Mr. Whitcher to purchase the collection, and probably they now regret not having secured it. A second collection was started by the same hands, which was exhibited at Mile-end, Montreal. The officers of the Fisheries Department were cognizant of this exhibit, but made no effort to secure it; therefore a part of it is now in McGill College Museum and the remainder was purchased by the Rev. C. J. S. Bethune and belongs to Trinity College, Port Hope, O. Now, the result is that these specimens are not available for loan, and from want of foresight much of the material which would represent the Food Fishes of the Province of Quebec, cannot now be obtained in time to be represented in the London Exhibition. If our Fisheries Department is to be a live Canadian Institution,

we want a long-headed, pushing man like Prof. S. F. Baird of Washington. A writer in the St. John (N.B.) *Sun*, seems to know more about our native food fishes, than the men at present in office. The Fisheries Department should be allowed facilities to form a museum of animals of economic value, coming from our marine and fresh waters, with the same opportunity to display objects of this kind here and abroad, as are extended to the Geological Museum. By the way, what are the naturalists connected with the latter institution doing? Why cannot one or two of them be sent to help Mr. Gregory down the Gulf? One man can do very little work in so short a time, especially on a steamer, and where is he to procure the material? It is absurd to send a man on an expedition of this kind. A good Taxidermist should have at least two assistants, besides means of procuring specimens. What has become of the objects collected in the deep sea dredgings in the Gulf? A schooner was employed to cruise in the Lower St. Lawrence, and it had a good crew to assist the dredging party, but something should be shown for the outlay. The Department of the Interior should also be at work. It has as much to do in procuring material for the coming Exhibition as a similar Department in the United States. Manitoba and the N. W. Territories have been represented; in fact the fish products of the latter regions are not even known in Ontario or Quebec. If we discover that the naturalists of the Geological Survey are lacking in energy, then something further must be said. The above statement is made that the public may learn something in regard to matters of this nature. The Montreal *Star* stated lately that Canadian museums had nothing Ichthyological to send to the London Exhibition. The writer made a mis-statement, as we know that Toronto University Museum contains a fine Canadian collection of Fishes and Reptiles. Laval University has quite a number of stuffed food fishes in its museum, and the

Literary and Historical Society of Quebec possesses a fair fish exhibit. The Natural History society of Montreal has a very good collection of the same material, and if the above institutions wished to send their combined collections to England, the total would be larger probably than that to be brought together by Scotland and England. But museum collections are not loaned, especially to go out of the country. We know a gentleman who has had experience of this kind; he made a loan of stuffed fishes for the Paris Exhibition; they were not returned, nor never will be. The fact is, they were supposed to be Government property, and it is therefore probable that they are at present in a French or British Museum.—C.

FISH-BREEDING IN CANADA.

We have before us, "The Daily Sun," St. John, N.B., containing over five columns of a review on Superintendent Wilmot's Report on Fish-Breeding. The writer in the *Sun*, although well posted in Ichthyology, comments rather severely, in fact spitefully against Mr. Wilmot's efforts to hatch fish. The reviewer charges as follows:—That "he (Mr. W.) failed in his quixotic enterprise;"—giving "glowing accounts in his characteristic style of florid description and incorrect statement;" that he kept "salmon stored up from July until November in that cesspool, the Carleton mill-pond, into which the sewerage of a large part of Carleton is drained," and further "that the Government has been paying vast sums of money in teaching this blunderer his science." The reviewer in the *Sun* has a perfect right to make a clean dissection of Mr. Wilmot's report, but when an attack is made upon a man's energy to develop and increase food fishes for the rich and poor of Canada, we think it is unjust to use such harsh language. Mr. Wilmot honestly states that he has failed in breeding *Salmo salar* on the borders of Lake Ontario, and he gives the cause. In fact, we were almost certain that the hatching of the latter species, so far inland, would ultimately fail. The Fisheries Department are greatly to blame for allowing so many stake-nets to block up the entrances of rivers. If salmon and trout are to be

caught by wiers and stake-nets, the latter should be placed one mile at least from the entrance of all the rivers, in order to keep the tide-way clear for the fish to reach the pools and spawning grounds. We believe also that the money spent in building fish hatcheries and maintaining officers, could be better and more profitably expended in improving the rivers and paying guardians or preventive officers to stop Indians and others from spearing salmon while depositing their ova. It is in these interior places that houses and officers are required. Leave nature to do its work, and place guardians on the spawning-grounds to prevent the fish from being disturbed, and doubtless a change for the better will soon appear. Parties renting a river, should be compelled to guard the estuary, seeing that the nets are properly placed, and the meshes of legal size. If this is done, we will hear of salmon becoming abundant—the fly fisher and net owner will have their share. The Government may do with the hatcheries what they think proper. We are satisfied that if salmon are not interfered with on their spawning-grounds, that more healthy fish will return to the sea from the natural hatchery than from the artificial one.—C.

BLACK BASS AND PIKE-PERCH.

We have had verbal accounts from various localities relative to inland fishing this season. Good sized Black bass and Pike-perch (Doré) are evidently abundant in some of the Quebec rivers, but especially the Canadian waters of Lake Champlain. Early in the season, Bass were found occupying grounds wherein schools of minnow occurred about sunrise. Sportsmen discovering the fish thus situated were then generally successful in taking Bass with a fly resembling a grasshopper. Black Bass are, at certain seasons, gregarious, following a leader, in the chase of small fishes; it is astonishing how Bass manages to secure sufficient of these small quick swimming fishes, but they do destroy numbers of them daily. All the species of fresh-water and marine Bass are truly carnivorous, preying on the weaker forms occurring in the same waters. We have opened the stomach of a large Sea Bass, sent to us from St. John, N.B., which contained thirteen adult herrings. Sometimes Black Bass have the same inquisitive nature noticed in the salmon and trout,

by rising to the artificial fly, when the colours of the latter attract its curiosity. Bass do not generally go in schools; but later in the day when the sun shines warmly, they separate retiring under the shade of aquatic plants or to rocky cavities, resting till after noon, when they return to deep water in search of food. Pike-perch (Doré) are ravenous feeders, especially in the morning, when they are in cool shallow water. At noon they do not, as a rule, seek the shade of plants, but move to deep water or a current in which to rest at a convenient depth, ready to devour any small fish passing or approaching them. The habits of Pike-perch are not unlike the common Yellow Perch when the latter attain adult form, it becomes a deep water wanderer, particularly where there are large ponds surrounded by marshes. This accounts for one making a good day's fishing over a certain ground, while the following day, the same place may turn out poor. There is therefore two portions of the day—morning and evening—that these fishes are on the move. Many persons who go fishing, return home either disheartened or disgusted when they meet with bad luck, often under the impression that no fishes were in the water, while in fact they were there—on their resting-grounds—but difficult to discover. A good indication of the presence of large fish, is in noticing minnows leaping over the surface of the water; the enemy is beneath them, and it is generally in the neighborhood of such places that large Bass, Pike-perch, and Maskalonge are to be found. We make these few remarks to give encouragement to the disappointed fisherman. Go to the same place again, and with a little experience, success may be the result.—C.

A PRIME FISH.

Mr. M. Wright, proprietor of the Cottage Saloon 74 St. Urbain street, Montreal, while trolling for fish on the south side of the St. Lawrence, near the foot of Lachine Rapids, struck a large Pike-perch (*Lucio-perca Americana*) commonly called Doré in this Province. His tackle consisted of a good silk line, rod and reel. The bait being Westwood's No. 4 gold and silver spoon; its concave side is red. The fish is 34 inches long, with the following circumference:—before pectoral fins 16 inches; centre of body 18 inches; front of anal fin 14 inches. Weight 13 lbs. Attached to the

little spoon are treble hooks of small size, trimmed with red, white and peacock herl. Mr. Wright played this fish for half an hour, and we look on it as a prime adult female *Doré*, of whose capture any sportsman would feel proud. It is to be stuffed for Mr. Wright.

LEMOINE'S BOOK ON ORNITHOLOGY.

J. M. LeMoine, Esq., of Quebec, is collecting material for a second edition of his French work on Canadian Birds. His aim is to produce a book which will be popular among students in seminaries, &c. There is no doubt regarding our esteemed correspondent's ability to write a scientific and agreeable treatise on our birds, and we wish him every success.

Correspondence.

LYNX RUFUS.—THE RED LYNX.

MR. EDITOR.—It gives me much pleasure to read the remarks on the Canada Lynx in your issue of June last. Having studied the subject, I wish to make some observations on the courteous notes referred to. What I understand the Peninsula of Ontario to be, is that portion west of a line drawn from Toronto northward to the south-eastern limit of the Georgian Bay. I have to-day sent down a typical specimen of *Lynx rufus*. Although I have obtained a few larger, the one sent by express, is a fair-sized animal. It weighed thirty-five pounds. Along with it you will find five skulls of different sizes; the largest is of an adult that weighed sixty-eight and a-half pounds. It was wounded with No. 5 shot about the end of January, but escaped; it was, however, found dead in March, 1879, and the skull is before you. I have trapped several of these animals, and handled dozens of their skins—young and old—in this section of Canada, and I never saw any variety but the one sent for your examination. I have long been of the opinion that these two varieties—species if you will—are one and the same; that *Lynx Canadensis* is merely a more northern form of *Lynx Rufus*; the varieties being produced by climate and food. This happens to other fur-bearing animals whose pelage is less developed in the south, and this causes much difference in color and general external appearance. I have before me Professor Jordan's "Manual of Vertebrates," and I give

the relative description of the two species side by side with my own observations in *italics* so that a comparison can be made without difficulty:

LYNX CANADENSIS.

LYNX RUFUS.

- | | |
|---|---|
| 1. Feet very large, densely furred beneath in winter, concealing the small naked patches. | 1. Feet not so much furred. "How do they differ in summer? They leave a very large track on the snow." |
| 2. Tail black at tip. | 2. Tail with black patch at the tip preceded by half rings. "In the adult these rings disappear, and are sometimes much more distinct in the young." |
| 3. No distinct bars on inner sides of legs. | 3. Inner sides of legs with dark cross-bars. "These are well-marked in the young but less so in the adults, and frequently there are none to be seen at all, <i>pure white</i> ." |
| 4. Much larger than next with larger feet and longer. | 4. Smaller—Less feet, less fur. |
| 5. <i>Habitat</i> —North America. | 5. <i>Habitat</i> —United States and Northward. |

In the specimen sent, there are merely blotches on the inner hind legs; the bars on fore legs are indistinct and mostly covered with white long fur that has to be separated to make them perfectly seen. There is a full tufted belt of long fur round the throat which, in old specimens I have seen very much larger. The ears are slightly tufted, but I have seen them more so, and over an inch of full pencelling on tips. It was shot in Kent Co. by Mr. Thos. Dusten, who kindly forwarded it. When in the flesh, the animal measured forty and a quarter inches from nostril to tip of tail. The specimen is, I think, about two years old, but a fair sample, although not adult. The largest skull belonged to an old male *L. rufus* which measured forty-nine and a-half inches from the nose to tip of tail. At first sight it may appear that the smaller skulls belong to a different species on account of the greater proportional development of the cavity of the

skull, but this is not so. I shall be glad to have information of the anatomical difference that is noticed in the osseous development and structure of the cranium, to develop distinct species. There is nothing in the descriptions of Jordan to prove anything specific, or that, might not be produced by a high northern habitat. The greater quantity of fur on the feet and longer body fur generally point to the animal's geographical range. The dark spots are, I consider, from the appearance of the Lynx in early life, and these will naturally fade in a cold climate. They are carnivorous, but the difference in quality of food in both species must vary between Labrador and South Ontario. Yet the size of mature forms appear to be the same, and I aver having shot and trapped *L. rufus* over sixty pounds. The largest, I can attest was sixty-eight and a-half pounds; others killed far in the interior of the bush, were certainly as heavy. I have seen many much larger than the one killed by Mr. Dusten, near Wallaceburgh—in fact, various sizes above the kitten of a few pounds weight, —the latter are always distinctly marked with spots. Lynx generally hunt in pairs at a considerable, although convenient, distance apart, in spaces between two hundred yards and half a mile in order to head off their quarry. When in full cry, they give two quick yelps successively, followed by an unearthly scream while running with great rapidity. I have often heard them thus when the snow was two or three feet deep, and as many as six of the animals giving tongue in different directions. An unpractised ear might easily mistake them for the howls of a pack of wolves in full cry at night. They may be considered outlaws with bears, skunks, wolverines, *et hoc genus omni*; are very destructive to fawns, rabbits, lambs and poultry; they also destroy numbers of ruffed grouse on their nests, or in winter when the birds are buried at night in the snow, and I have seen the fatal traces on more than one occasion, where a Lynx or a Fox thus secured a supper. I shall be happy to procure a true *Lynx Canadensis* captured anywhere in Ontario, especially in the Peninsula, taken any time between the 15th of November and 12th of April. This will settle all disputes, and I will pay a reasonable price and carriage with pleasure. The spoor of the Red Lynx is large on snow, and although the feet are not so densely furred as its northern relative, the foot impression of *rufus* on the snow looks large and round in proportion to the size of the feet

of the animal in the dead state. They become fat at certain season, and they are eaten by Indians who pronounce them good. The *L. rufus* is at maturity when it passes its fourth year. The specimen sent is nearly adult; its sharp teeth and medium size are my proof, together with the semi-rings on the tail, now disappearing; also the black marks on under parts of body, which are much less in adults, and are frequently altogether absent or obliterated. It is easily trapped, not being very shy; nor has it the cunning of a Fox. When hunted by man alone, or by the latter with dogs in the forest, it takes to a thicket, being a nimble climber; cat-like, resting a short time on each limb. The ears are sharp, the tympani sensitive, and when danger approaches, it springs from tree to tree like a squirrel, sometimes leaving its pursuers hundreds of yards behind. The old trapper or Indian understand the feline tricks of the Lynx. I have followed and shot one that went nearly a quarter of a mile in this manner, hiding himself as a last resource, in a dense hemlock tree, forty feet above the ground. This is simple work after a fresh fall of snow. You have merely to mark carefully the first tree he mounts, as at its base, you will notice bits of twigs, moss, &c. on the fresh snow. As he springs away, he leaves additional marks which he throws down in like manner, but more scattered. By following the debris a broad trail is visible. It is with greater facility followed in a swamp, than in open ground, because there is generally more broken material thrown down, and the animal is easily detected. The Red Lynx springs easily from sight to fifteen feet, perhaps more. Once only during my hunting trips, I noticed a Lynx take a long spring from tree to tree. An Indian and myself chased it with two dogs for over three miles. The aborigine pointed the Lynx preparing to spring from a branch of a tree to another at least sixty feet from the ground. The extremities of the branches were three or four feet apart. The animal did spring and certainly cleared sixteen feet, but no more. Now, let any one of your readers consider how far the space is in mid-air, from that portion of a limb capable of supporting forty-five or fifty pounds of live Lynx throwing himself to an opposite branch of similar strength. Let one consider the muscular force and accuracy of eye required by the animal to reach the object of escape. The young *L. rufus* in my opinion approaches Jordan's *L. Canadensis*. Mr. Henderson found

it near Lucknow, and I had the pleasure of receiving it from him. They (the old ones) are very shy during the breeding season, after constructing a bed in a hollow log or some secluded place. On one occasion, in July, many years ago, I was in Turnberry Swamp looking for pigeons. I had a dog wandering about with me, and he gave tongue at some distance; it was near sunset and I hurried towards the place, thinking he had attacked a Porcupine. On arriving where the dog was, I saw a large Lynx and two young ones (kittens) which on my approach, entered a hole at the base of an elm tree, before I could cover them with my rifle. The old one made frantic charges at the dog which I called away from the contest, and after I closed the hole with fallen limbs, to keep the party secure, I went home. Early next morning in company with a neighbour, the place was visited, but to our astonishment a hole was opened in another place at the base of the tree, and the Lynx and kittens gone. I give a short account of the skulls of *L. rufus* sent to you for inspection, all of which were killed within a few miles of this place.—

No. 1—Adult male, shot by me in January, 1879. Length 49½ inches. Weight 68½ lbs. This was one of the largest I met with, and am sorry to have lost the skin.

No. 2—A female. I presume three years old. Weight 53 lbs.; Length 48 inches. Shot February 23, 1882, by Mr. Alfred Haldingby of Culross Township, Ont. In this instance also I lost a very fine specimen.

No. 3—Young female trapped and shot in the head by Mr. Sutherland Taylor, 1878, in Wawanosh Township, O. Length 38 inches; Weight 30 lbs.

No. 4—A young male, shot by Jos. Henderson of Lucknow, O., who gave me the animal fresh. Length 38 inches; Weight 25 lbs.

No. 5—Young male, shot by myself, on December 1, 1881, in Ashfield Township. Weight 27 lbs. Length 37¾ inches.

In the last three the symphysis and the sutures are not solidified. They are therefore the skulls of young *L. rufus*.

I sincerely hope this may draw forth the opinions of others on the Lynx forms occurring in Canada, I trust moreover that a valuable periodical like "The Canadian Sportsman and Naturalist" will soon have means to illustrate subjects of this description.

J. H. GARNIER, M.D.

Lucknow, Ont.

NOTE.—We have received the specimens sent for examination. The adult skin and the stuffed kitten are specifically *L. rufus*. The whole of the skulls belong to the latter species. Our correspondent quotes Jordan's Manual of Vertebrates to distinguish between *L. Canadensis* and *L. rufus* which comparatively we consider very vague. Independent of the permanent marks and general colour of *L. rufus*, when the Dr. has an opportunity of comparing *L. Canadensis*, he will discover that the latter is a true and well defined species. It is futile to deny the occurrence of the two species in Ontario. Without giving the osteology of the animals, we may state positively that they are not alike. First in an exterior view, we notice that the marks behind the ears of the kitten of *L. rufus*, are permanent in the adult. The Dr. has overlooked these evident specific marks which do not occur in *L. Canadensis*. A frigid climate will doubtless alter the exterior markings or colour of animals unused to a low temperature. We know that a coolie dog when taken from Scotland to an Arctic region, there to remain for three years, causes the animal to erect its ears and change colour but the osseous parts are still those of a coolie. Exposure to a frigid pressure is even remarkable in the human form, when subjected to the same influence. We have no space to go further at present, but in the meantime the subject can be looked into by our readers who may give additional light on it.—C.

RARE BIRDS IN ONTARIO.

STR,—Having read with much pleasure, in your valuable journal, accounts of other collector's experiences in the Ornithology of our country, the thought struck me that some of my notes might be acceptable to you. During this Spring, from 8th April until 23rd June, I, in company with my assistant, were collecting at Mitchell's Bay, and adjacent marshes, where we preserved over one thousand four hundred specimens of birds, fish, reptiles and birds eggs; but the bird that

astonished us most by its numbers, was the Lapland Bunting or Longspur (*Plectrophanes lapponicus*). The inhabitants told us they occur there every winter, and are called by them the black or dark Snow-bird, but to us they began to appear about the 17th of April. First we observed three flying over us as we were tramping the marshy shore in search of desirable species coming in our way. The Buntings were leisurely flying eastward, constantly uttering notes differing somewhat from those of the Snow Bunting (*Plectrophanes nivalis*) being harsher and in a different tone. The following Sunday, April 23rd, I was reading in the house of our host, when my assistant returned from a walk on the shore; he informed me that he noticed a flock of about two hundred birds which were strange to him, and very remarkable by their black throats. When these birds alighted on the ground, a person could walk into the midst of the flock, within six feet of many of them, but on the least noise being made, they would become alarmed, rising in a circular manner to the height of about seventy feet, and for a time disappear. We saw flocks of from six to one hundred and fifty almost daily until about the 20th of May, when they left us altogether. The specimens shot at the latter date were invariably females, but we succeeded in collecting about sixty, many of which are beautiful adult males. Why do not these birds occur at or near Hyde Park or London, while they are so abundant at Mitchell's Bay? I presume they follow the shore of lakes, therefore passing over the latter places; at all events I have not hitherto heard their notes, although collecting birds in the neighbourhood during the last seven years. I had a single specimen in my collection and looked on it as rare until this Spring. It was shot near St. Thomas, Ontario. The song of the Lapland Bunting is very similar to that of the Purple Finch (*Carpodacus purpureus*), and they were in full song after we noticed them. We collected one specimen of the Cape May Warbler (*Dendreca tigrina*) which is the first I have seen in this region.

JOHN A. MORDEN,

Hyde Park, Ont., July 1882.

NOTE—We have no record of the occurrence of the Lapland Bunting in the Province of Quebec. The Snow Bunting (*P. nivalis*) is frequently accompanied in early Spring with

the Shore Lark (*Eremophila cornuta*). The latter is abundant on the Labrador coast flying in flocks in Spring. The inhabitants say they make an excellent pie.

DEAR SIR,—C. J. G. Fraser writes in July, about *Anthus ludovicianus*, and from various reasons I think the bird is the Shore Lark (*Eremophila cornuta*). The Lark is common here* through the summer, while *Anthus ludovicianus* only occurs during the migrations and then sparingly. Shore Larks almost always breed on commons where cows feed, and their nests are generally placed in a small hollow on level ground. That is the single difference between C. J. G. F's account of *ludovicianus*, and my observations of *cornutus*. I have often seen the latter rising in flight, singing its "sweet note," until it reaches a height of "perhaps fifty feet," when suddenly closing its wings, it drops perpendicularly till within about twenty feet of the ground. Generally, however, the bird mounts much higher, often so high that, lying on my back on the ground, I have had some difficulty in following its flight; probably the distance would be about two hundred yards. Mr. Fraser was evidently a tyro in Ornithology at the time of his observations, confounding two birds which to-day he would at once recognize as distinct species. *Query*.—How far east have Orchard Orioles reached? They are very common in Kent County, not rare here; a small number breed, but I have not heard from further east.

Yours truly,

W. E. SAUNDERS.

London, O., July 22nd, 1882.

COLEOPTERA FOUND IN THE PROVINCE OF QUEBEC.

By WILLIAM COUPER.

- BEMBIDIUM 1 paludosum, Panzer.
 2 inaequale, Say.
 3 chalcum, Dej.
 4 nigrum, Say.
 5 simplex, LeConte.
 6 lucidum, "
 7 semistriatum, Hald.
 8 rupestre, Dej.
 9 patrule, "

- BEMBIDIUM 10 variegatum, *Say*.
 11 versicolor, *LeConte*.
 12 fontale, "
 13 4-maculatum, *Linne*.
 14 bimaculatum, *Kirby*.
 15 impressum, *Gyll*.
 16 transversale, *Dej*.
 17 incrematum, *LeConte*.
 18 diadatum, "

- TACHYS 1 nanus, *Schaum*.
 2 flavicauda, *Say*.
 3 incurvus, "

- HALIPLUS 1 triopsis, *Say*.
 2 immaculicollis, *Harris*.

- CNEMIDOTUS 12-punctatus, *Say*.

- AGABUS 1 tristis, *Aubé*.
 2 punctulatus, *Aubé*.
 3 semivittatus, *Lec*.
 4 punctatus, *Mels*.
 5 hypomelas, *Mann*.
 6 bifarius, *LeConte*.
 7 fimbriatus, "

- HYDROPORUS 1 conoideus, *LeConte*.
 2 spurius, "
 3 modestus, *Aubé*.
 4 puberulus, *Lec*.
 5 catascopium, *Pay*.
 6 similis, *Kirby*.

- LACCOPHILUS maculosus, *Germa*.

- COPTOTOMUS interrogatus, *Fabr*.

- MATUS bicarinatus, *Aubé*.

- COLYMBETES 1 biguttulus, *Germa*.
 2 binotatus, *Harris*.
 3 sculptilis, "
 4 4-maculatus, *Aubé*.
 5 picipes, *Kirby*.
 6 agilis, *Fabr*.

- ACILIUS fraternus, *Lec*.

- DYTISCUS 1 confluens, *Say*.
 2 Harrisii, *Kirby*.
 3 verticollis, *Say*.
 4 Cordieri, *Aubé*.
 5 fasciventris, *Say*.

- GYRINUS 1 ventralis, *Kirby*.
 2 fraternus, *Couper*.

The type of this species is in the collection of Laval University, Q.

- DINEUTUS 1 Americanus, *White*.
 2 discolor, *Aubé*.

- HELOPHORUS 1 lacustris, *LeConte*.
 2 scaber, "
 3 lineatus, *Say*.

- HYDROBIUS 1 tumidus, *LeConte*.
 2 digestus, "
 3 globulosus, "
 4 regularis, "
 5 fuscipes, *Curtis*.
 6 subcupræus, *LeConte*.
 7 despectus, "

- HYDROCUS squamifer, "

- HYRÆNA Pensylvanica, *Krizenwetter*. Rare.

- HYDROPHILUS 1 triangularis, *Say*.
 2 lateralis, *Fabr*.
 3 glaber, *Herbst*.
 4 mixtus, *Lec*.

- HYDROCHARIS obtusatus, *Lec*.

- BEROSUS 1 striatus, *Say*.
 2 peregrinus, *Herbst*.

- LACCOBIUS agilis, *Randall*.

- PHILIDRUS 1 cinctus, *Say*.
 2 fimbriatus, *Mels*.
 3 æraceus, "

- CERCYON 1 posticatum, *Mann*.
 2 unipunctatum, *Linn*.

- CRYPTOPLEURUM vagans, *Lec*.

- NECRODES surinamensis, *Fabr*.

- THANATOPHILUS 1 lapponica, *Herbst*.
 2 marginalis, *Fabr*.

- NECROPHILA peltata, *Lec*.

- SILPHA inæqualis, *Fabr*.

- NECROPHORUS 1 marginatus, *Fabr*.
 2 pustulatus, *Herschel*.
 3 orbicollis, *Say*.
 4 lunatus, *Lec*.
 5 Sayi, *LaPorte*.
 6 velutinus, *Fabr*.
 7 pigmæus, *Kirby*.
 8 mortuorum, *Fabr*.
 9 Melchimeri, *Kirby*.

- CATOPS opacus, *Say*.

- ANISOTOMA collaris, *LeConte*.

- LIODES dichroa, "

- AGATHIDIUM oniscoides, *Beauvais*.

- SCYDMÆNUS rarus, *LeConte*.

- TYRUS humeralis, "

- FALAGRIA 1 dissecta, *Erichson*.
 2 venustula, "

- HOMALOTA plana, *Gyllenhal*.

- ALEOCHARA 1 fuscipes, *Fabr*.
 2 lata, *Grav*.
 3 limaculata, *Fabr*.

- COPROPORUS ventriculus, *Kraatz*.

(To be continued.)

THE CANADIAN SPORTSMAN AND NATURALIST.

No. 9.

MONTREAL, SEPTEMBER, 1882.

VOL. II.

WILLIAM COUPER, Editor.

CALIFORNIAN SALMON AND OUR SALMON RIVERS.

The introduction of foreign SALMONIDÆ into Canadian waters inhabited by *Salmo salar*, is, in our opinion, unnatural. There is no necessity for introducing Californian Salmon into our northern rivers; *S. salar* has too many enemies already without adding to them. We know sufficient of the Natural History of the latter fish to say that it will never agree with another species inhabiting the same river—the weaker must succumb to the stronger—the Californian fish where it is planted with success, will ultimately cause *salar* to abandon our rivers. The men who are anxious to carry out these changes, would possibly prefer the Californian to the European form of salmon, but we think it would be more satisfactory to retain the latter; our sportsmen understand its habits, knowing it to be the most gamy fish that enters our rivers. A charge is made against an overseer for casting young Californian Salmon into ice holes on the St. John, (N.B.) river in the month of March. We think the man did perfectly right in getting rid of them in this way. It is a waste of money to endeavour to restock a river with salmon when the tributaries are interfered with. The woodlands surrounding the mountain springs should be allowed to remain in their primitive state. We care not how magnificent a river may appear to the eye of man, salmon, as a rule, will not enter it when its immediate woodlands and flowing mountain springs are destroyed. All the best salmon rivers in this Dominion are generally wide, swift-running, with falls and pools a few miles from the sea, but let us follow any of them for some distance inland, and they will be seen to diverge into a number of

small tributaries, arising from cold mountain springs, many feet above the sea level. Then, we say, if salmon are to be increased in future, these springs must be retained in their old state. How is it that we cannot procure discriptions of the inland sources of several rivers in the Province of Quebec? Simply because officers of the Fisheries Department never took the trouble to explore them, and it is only at this late day when many of the rivers have passed from their control that they begin to think there is something in the upper waters in connection with continual existance of salmon;—that in fact the inland streams are becoming caloric, and salmon will not remain there—therefore no matter how beautiful the river and its pools may appear, so long as the head sources of a river is unfit for the hatching of salmon *ova* and the propagation of young fish, it will be useless to endeavour to restock it, the parent fish will leave it forever.

There is not sufficient trouble taken to obtain a knowledge of our rivers—we mean the upper portions—the natural hatcheries. It is always gratifying to one interested in a river, to see numbers of fish passing up, but it would be greater satisfaction to ascertain how far they go inland; the temperature of the water, and the locality selected by them for their future progeny. A short time ago, Mr. Gilmour, wishing to obtain this information regarding the Godbout, sent intelligent men many miles up to explore the land. They returned with a satisfactory report; passing through a rugged region, with many lakes and rivulets falling into the main river. The lakes contain plenty of fish food peculiar to inland waters; in fact, abundance for salmon during their stay in the inland waters of the Godbout sources. Through the care of natives for Mr. Gilmour's woodlands along the river,

so far they have escaped from fire. This is not the case with rivers further down the coast, where large tracts of the interior have been burnt thus destroying the cover on the margin of streams where salmon deposit their *ova*. We remember some years ago, when the whole of the interior lands behind Natashquan were set on fire, lasting three months, in fact, until it burnt itself out, and we know that for years following, salmon decreased in the rivers inhabited by them on this portion of the coast.—C.

THE FORESTRY CONGRESS.

It is the duty of Canadian and American Sportsmen and Naturalists to take an interest in the protection of the forests of their respective countries. Sportsmen on both sides of the line must keep a sharp lookout in order to preserve the wild animals inhabiting our forests. Game animals are disappearing simply because their selected homes are invaded by human rangers who go out in quest of timber for the benefit of the present generation. Forest material must be obtained of necessity, but from what we have seen surrounding lumber shanties, there appears to be enormous waste not only of woods of commercial value, but by fire and gun, animals are destroyed in a merciless manner. Lumbermen have been known to cut down more than they are able to carry away.—Majestic trees which stood at some distance from an aquatic outlet, have been chopped and left where they fell,—all lost for want of proper judgment. This occurred to our knowledge on the high woodlands of the upper Assomption River; it is therefore no wonder that the Company failed to prosecute a profitable lumber trade in this region. The subject of forest protection and replenishment is of the highest importance, and the welfare of this Dominion depends in some degree on the future supply of good commercial woods. We have, in the lands already denuded and at present a waste, space

and earth-food for a duplicate crop of such trees. Who will undertake to cultivate this fresh growth? The Local Governments of the Dominion should certainly do something to have their burnt and waste Crown Lands replanted. Dr. A. D. K. King of Compton says:—"If it is prudent, not to say a duty, of Governments and other lessors of large tracts of wooded lands, to preserve the timber from waste, it were equally so the duty of individuals. A large and important part of this Province is divided into lots, some of which contained too much timber for general purposes for agriculture, the farmer possessing a new lot, looking upon every tree as an enemy, and seeking to destroy it in order to give him space for tilling the soil. Other lots, which had little woodland, the owner did his best to economize. He would suggest that before felling, a careful examination should be made so that the dead or dying trees might be selected. Propagation might be done by seed sowing or planting."

Many years ago, Mr. Todd, the Librarian of Parliament, suggested to the writer, the necessity of agitating this subject through the Canadian press. He saw at that early day, a time drawing near when a vigorous cry would arise regarding the enormous drain on our forests; that in consequence of the continual demand for timber of various kinds, our woodlands would ere long be exhausted, unless means were taken to replant the lands annually weeded of the best trees. His words are now verified; men are awakened to enquire into the matter. We are pleased to give this short record of the efforts of intelligent men who have lately met in Montreal to consult on Forestry and trust that in a short time their labours will be rewarded; that Parliament will notice a strong pressure of facts from without. The next good move should be a Congress of American and Canadian Sportsmen to provide correct means for the protection of Fish and Game of both countries. There are several interesting subjects which may be discussed at meetings of true Sportsmen—such as the effect of forest fires causing the decrease of animals; fish and

game protection in an American and Canadian view; harmonizing the Game Laws of the Provinces; correct nomenclature of the Game animals and other kindred subjects. American sportsmen have a greater interest according to numbers and position, in taking part in a Congress of this nature than we have, besides there is something congenial in a meeting of true sportsmen; All have the same objects in view. We at least protect the bulk of woodcock and snipe bred in the north, more for the benefit of our neighbouring sportsmen than our own. We do the same with geese and ducks, classed as game occurring on the waters of both countries.—C.

THE ST. FRANCIS SALMON.

The Sherbrooke *Examiner* of 4th ultimo, made a charge against Mr. W. C. Willis, a Fishery Overseer, for granting permits to take salmon from the tributaries of the St. Francis River with "fly and minnow." An anonymous writer in the Montreal *Star* of 12th ult. reiterates it *cum grano salis*, under the sig. of "One who has caught Salmon with a rod." The *Star* knows this salmon-rod sport; he is doubtless known to the Fish and Game Protection Club of Sherbrooke, and we trust they will look further into the matter. We now see that "W. C. W." takes the *Star's* sport by the nose, telling him that he is lying in every particular, notably regarding the catching of salmon with "dip-nets" at Brompton, or with the fly or minnow near the latter place. The Overseer says:—"I have consulted several old sportsmen, who assert most emphatically that they never heard of or saw a salmon which was caught (in the St. Francis) in the manner spoken of by your correspondent. It would be interesting to be informed of the time and place of this extraordinary catch. The Fisheries Department, as a great favor, granted fifteen days to catch a few salmon, by the only means they can be taken, in that river, at which this person grumbles, while he fails to notice the thousands that are yearly taken in rivers of the lower St. Lawrence by nets and pounds, of

which we in the townships seldom or ever get a taste. These fish begin to ascend the St. Francis River annually about the middle of July, thence they pass up the Salmon River to the spawning grounds situated in the township of Ditton. During their passage up they seem to refuse all food; the most fascinating fly has been thrown across them, but all in vain, not a "rise" can be got, though the burnished sides of the tempting beauties are plainly visible beneath the current."

Taking a truthful view of Mr. Willis' statement—i.e.—that salmon pass up the St. Francis "annually about the middle of July, when they refuse all food; even the most fascinating fly," is a peculiarity in the history of *Salmo salar* unknown to us. We have no knowledge of this river as far as Brompton, but it is however evident that no pools or falls interrupt the fish to the latter place. Mr. Willis says that they "pass up the Salmon River to the spawning-grounds situated in the Township of Ditton," but we have no proof that a "rise" can be had even in this river. If it is true, we now say to the Fishery Department, place a guardian on the upper waters of this river. Here, we have an overseer stating that salmon go up the St. Francis (we suppose) without resting, continuing on to inland waters called the Salmon River, on the upper sources in which the fish spawn. This locality is the place we wish to see guarded. The cool mountain tributaries; the woodlands surrounding these spawning-grounds should be protected. Taking Mr. Willis' statement that no salmon were caught on the St. Francis by fly or minnow, during the last thirty years, we suggest that no netting be allowed on any portion of the rivers for three years at least. By so doing, good results will follow, and salmon will become abundant in these rivers, and they may be tempted to make their way to waters further inland. We say protect the Ditton Township spawning-grounds, facilitate passages for salmon endeavouring to mount the St. Lawrence above Quebec, and there will be no

necessity for the people of the townships saying that while salmon are caught "in nets and pounds" in the Lower St. Lawrence, we, the people of "the townships seldom or ever get a taste." "The fifteen days granted to catch a few salmon by the only means they can be taken in the St. Francis shows that the overseer has been allowed by some one in the Department to give parties liberty to catch salmon on the two rivers during this space of time, therefore, considering every word so far published on the subject, the charge of the complaining party has some foundation in fact, as the overseer acknowledges that the fish are allowed to be caught by nets of some kind during the space of fifteen days. Can any one give us additional information regarding the locality in which the netting of salmon occur in the St. Francis? When the facts are given us then the subject matter will be properly sifted.—C.

THE ENTOMOLOGICAL SOCIETY OF ONTARIO.

ITS ANNUAL MEETING IN MONTREAL.

A meeting of the Council of this Society was held at the residence of Mr. G. J. Bowles, Vice-President, on Thursday, August 24th, at 11 o'clock a.m. The following officers were present:—William Saunders, President, London, Ont.; G. J. Bowles, Vice-President, Montreal; Rev. C. J. S. Bethune, M.A., Port Hope, Ont.; E. Baynes Reed, Secretary-Treasurer, London, Ont.; James Fletcher, Ottawa, Ont.; J. M. Denton, London, Ont.; William Couper, Montreal; W. H. Harrington, Ottawa.

The Secretary-Treasurer read the annual reports, which were found satisfactory. After discussing several subjects relative to the welfare of the parent society and its branches, the members examined Mr. Bowles' fine collection of insects, many of which were greatly admired. The Council then adjourned until three o'clock p.m., to hold the annual general meeting in the rooms of the Natural History Society. There was a good attendance, including many ladies. After Mr. Saunders called the members to order, the Secretary read the annual report of the

Council, which gave the reasons for holding the meeting outside of Ontario. It had been felt that the selection of Montreal for the meeting of the American Association for the Advancement of Science and the consequent gathering of distinguished entomologists from the other side of the line, together with the members of the Montreal Branch, would afford an opportunity not to be missed, and accordingly the Hon. S. C. Woods, Commissioner of Agriculture for the Province of Ontario, had been applied to for permission to hold the annual meeting in Montreal, to which he gladly consented. It was therefore a point of no small importance in the history of the Society, and they heartily welcomed all their foreign brethren. The report referred to the endeavor made in the Dominion Parliament last session to get scientific books for libraries on the free list, which was unsuccessful, but they were hopeful that in the next session they would meet with better success, for the imposition of this duty did no good to any one, as our Canadian publishers did nothing in that line. It expressed regret that the Entomological Section of the American Association had been merged in Section F (Biology) which might prevent the adequate discussion of their particular branch of natural history, and hoped that members would endeavor to form a club for the more frequent discussion of their beautiful science.

The annual report of the Montreal branch was considered in every way satisfactory.

The election of officers was then proceeded with, resulting as follows: Mr. Wm. Saunders, London, Ont., President; Mr. J. G. Bowles, Montreal, Vice-President; Mr. E. Baynes Reed, London, Ont., Secretary-Treasurer; Rev. C. J. S. Bethune, Port Hope; Messrs. J. A. Moffat, Hamilton; James Fletcher, Ottawa; Rev. F. W. Fyles, Cowansville, P. Q.; Messrs. J. M. Denton, London, Ont.; W. H. Harrington, Ottawa, and W. Couper, Montreal, composing the Council. The auditors chosen were Messrs. Chas. Chapman and H. Bock, and the President was reappointed editor of the *Canadian Entomologist*.

The following embraces the substance of

THE PRESIDENT'S ADDRESS.

Mr. Saunders, on rising to deliver his annual address, was loudly applauded. He said that he felt it was no common period in the Society's career; it was the first time they had met outside of Ontario, and in the name of the Society he offered his felicitations to all

who were strangers. The insect that had attracted the most attention during the past year was undoubtedly the Hessian Fly, which had injured the wheat crop in Ontario about 20 per cent., or to the value of many hundreds of thousands of dollars. Since 1878 they had been comparatively free from this scourge, but now they had returned in very great magnitude. He described the manner of the growth of this dreaded pest and their effect on the plants they ruin. No successful measures had yet been devised for their cure or killing; some people advocating the immediate reaping and thrashing of the wheat; others were for burning the field as it stood, but it must be remembered that this would also kill the many friendly parasites who were the farmer's friends; and some people were in favor of harrowing the stubble and thus clear the ground. But in his opinion the only effectual remedy was late sowing, which rendered the wheat better able to withstand its enemy. He referred incidentally to the parasites to which the farmer was very much indebted for their destruction of hurtful insects. He had noticed in Ontario what many people doubtless thought did not exist in this country, he referred to the *Phylloxera* which had caused so much damage in France to the vines. A person untutored in the matter would be greatly surprised at the extent to which it prevailed, and he explained the time and manner of the growth of the insect and the way it went to its deadly work. He showed some examples of the *Diplosis*, the only parasite inimical to the *Phylloxera*, and expressed the hope that it would be extensively distributed in districts where the latter prevailed. The short fruit crop of the year had been put down by many to insects, but it was in reality the very wet weather and low temperature that prevailed in the Spring. He looked forward to an excellent crop, all things going well in 1883, as it was generally the case after a short year. It was the opinion of many that California was the fruit grower's paradise, and it undoubtedly was so till 1874, when insects were rare. Since then, however, they have begun their ravages, and the State Legislature has been compelled to make provisions for their prevention. An inspector is appointed, with sub-inspectors, authorised to visit each grower, and in the event of his not obeying certain regulations, he was liable to a fine. The whole process only costs the State \$10,000 a year, and he was of opinion that if it proved

a success in the Far West, it should be tried here in the East. It was certainly the right thing to do in their case and why not in ours. The President resumed his seat amidst loud applause.

The annual meeting of the Entomological Society of Ontario then adjourned, and Dr. Hagen, of Cambridge, Mass., drew attention to the status of the Entomologists in relation to the section of Biology in the A.A.A.S. The Entomological Club had, a year or two since, been merged in that section, and that state of affairs is not satisfactory at present.

GENERAL MEETING OF ENTOMOLOGISTS.

Dr. Hagen moved a resolution that the Entomologists resume their old status in relation to the Biology Section, but without any regular organization, the understanding being that they meet a day before the A.A.A.S. each year, and that Mr. Lintner, of Albany, be responsible for due notice, etc., in calling them together.—Carried.

There is a feeling of discontent among the American and Canadian Entomologists regarding their present status in connection with the American Association for the advancement of Science, *i.e.*, their transfer to section F. in Biology, which doubtless will terminate in the formation of an International Union of Entomologists, who can meet wherever they please to discuss their subjects without embarrassment.

Springing from inquiries made by Mr. Fletcher, an interesting discussion took place on the cotton moth, he said, Mr. Riley, of Washington, had made investigations which had all gone as evidence to prove that the insect had no other food plant than the cotton plant. Specimens of the cotton moth had been found in the Northern States and Canada, where no cotton grew, but these might have flown there, as the moth was capable of immense flights. Mr. Riley did not believe it could perpetuate itself outside of the cotton belt.

Dr. Hoy, of Racine, Wisconsin, said he had found a specimen of the cotton moth in the north whose wings had not hardened; it must have been born there. Other gentlemen had met with the same experience.

Mr. Saunders thought it possible that insects so found had been brought to the finding place either in an egg, larva or chrysalis state in nursery plants, etc.

The evidence recited by various speakers went to show that while in a number of cases the cotton moth had been found sometimes with crippled wings, far away from the cotton belt, still no plant other than the cotton plant had been discovered on which they could live.

Before the meeting broke up, Dr. Hagen and Mr. Henshaw, of Washington, gave interesting accounts of their visit this summer to Washington Territory for the purpose of collecting and studying the insects of that region.

The following American Entomologists took a part in the proceedings, Prof. Comstock, Ithaca, N.Y.; R. Dodge, Washington; Homer F. Bassett, Waterbury, Conn.; Prof. C. H. Ferland, Orono, Maine. All had an exceedingly pleasant time in examining the rare insects which members brought there for identification. We agree with Mr. Saunders that Entomologists should endeavor to devote more time to investigate the life histories of insect parasites, in order that farmers may be educated to discriminate friends from foes; we retain the opinion that there are insect parasites following every form from the hard shelled beetle to the soft bodied spider, or even lower and more minute forms of insect life. No one thought of noticing the minute Hymenopterous insect which destroys the chrysalis of the Cabbage Butterfly, yet, the parasite is said to have existed on this continent long before the introduction of the butterfly into Canada. Too much time have been given to the study of large American insects; many Entomologists look on minute forms of *Hymenoptera* and *Diptera* as significant, whereas these creatures may turn out to be our friends, and profitable to us. They are placed here for some purpose, and their economy should be studied.

A subsequent meeting was called by Mr. Lintner at the residence of Mr. Bowles, to consider the formation of an Entomological Club. The following gentlemen attended—Messrs. W. Saunders; H. F. Bassett; Prof. Riley; Prof. McCook; Rev. F. W. Fyles; H. H. Lyman; Prof. Claypole; R. Dodge; Ernest D. Wintle; G. J. Bowles and W. Couper. Nothing definite was done regarding the desired change, the feeling of a few members tended to allow matters to remain as they are at present. After a pleasant conversation on other Entomological topics, all parted with the hope of meeting again.—C.

Correspondence.

ANSWER TO CORRESPONDENTS.

W. A. H., Sherbrooke—Maple trees have been introduced into the United States and Canada from many parts of the globe. Over twenty varieties from Japan. Maple is popular as shade and lawn trees in all American cities, from sixty to seventy varieties are used. The species which attracted your attention on Drummond street is native; called the Silver Maple (*Acer dasycarpum*). Its growth is rapid; form irregular; foliage light green, silvery underneath; very hardy and easily transplanted. It is one of the best avenue trees. Three other species, viz—the Scarlet or Swamp M. (*A. saccharinum*); the Sugar or Rock M. (*A. nigrum*), are used as ornamental trees in the neighbourhood of Montreal. Ruffed Grouse and allied northern species and the Ptarmigan have the habit of burying themselves under soft dry snow, but whether the former remain long enough to be frozen in and perish, we cannot say. Numbers of Ptarmigan have been found dead in the woods of Labrador in spring. They are supposed to have been caught by a sudden frost making them prisoners, and death ensued from starvation.

Mr. John A. Morden, Hyde Park, Ont.—The skins of the Lapland Longspur (*P. lapponicus*) have been received. They are carefully made up and a credit to your art. Since we stated that the species have not been obtained in the Quebec Province, Mr. N. A. Comeau of Godbout, informs us that he can procure them every season at his place. We will publish your observations on the breeding habits of the Red-headed Duck, or any other water-fowl found on the St. Clair Flats.—C.

THE MONTREAL DOG FANCIERS' ASSOCIATION.

We have before us, the prize list and rules for governing the first Annual Exhibition, which takes place on the 18th, 19th and 20th instant. The names of the officers for the current year are as follows:—Major Thomas A. Evans, President; C. E. Gagnon, Esq., and Wm. Mackenzie, Esq., Vice-Presidents; John F. Campbell, Esq., Secretary; James Lindsay, Esq., Treasurer; Dr. J. E. Nichol; J. Nelson, Jr., Esq., George Jordon, Esq., J. A. Pitt, Esq., John Wilson, Sr. Esq., and Sergt. B. T. Holbrook are the Committee of Management.

E. C. Barber, Esq., and R. H. Kilby, Esq. are the Judges, who will be guided by the Vero Shaw Standard of excellence. A properly organized association of this kind was really required in Montreal, and the men at its head are just those who will strenuously adhere to the Constitution and By-Laws. A sportsman is nowhere successful unless he is followed by a well-trained dog, and without an institution of this nature, that class of dogs required for the chase, will never be more than a series of mongrels. Under the new organization, we anticipate an attractive exhibit with beneficial results.—C.

THE GODBOUT RIVER SALMON SCORE.

On an average, three rods were employed on the above river this season. The total catch being 384 salmon. In one day, Mr. Manuel of Ottawa, landed thirty-one fish. Considering the scarcity of salmon for three years past in the Gulf rivers, the old Godbout still holds good for a month's surface fishing. Its Salmon and Sea Trout spawning-grounds are far in the interior, and although the mountain Indians may occasionally traverse along the tributaries in which the fish are lying, they do not interfere with them. Extreme want alone will cause these people to disturb salmon while in their mountain waters. The aborigines of the district are generally well treated by Allan Gilmour, Esq., the proprietor, and they have therefore great respect for him.—C.

Deanery, Kingston, Ont.
11th August. 1882.

DEAR SIR,—Many thanks for your interesting and instructive "Naturalist," which I have taken since the beginning.

On my son's farm near this city, I saw some gamy birds, very like Quail, but with a dark yellowish breast. Upon securing a specimen and taking it to an expert, he called it a "Meadow Lark;" is it the "*Eremophila cornuta*" or what?

Faithfully yours,
JAMES LYSTER, LL.D

NOTE—The breast of the Meadow Lark (*Sturnella magna*) is a clear yellow when it visits the North in Spring. It may be found in fields as far east as Kingston. The American Sky Lark (*E. cornuta*) is smaller than the Meadow Lark and its breast is differently

marked. Of late years this Lark nests in Ontario and Quebec. Neither of these birds are classed as game, although a dog will point at the Meadow Lark, we suppose from noticing the gamy colour of its back, and its peculiar mode of locomotion during the nesting season. We shall be pleased to hear from the Dean again, as enquiries of this nature have a tendency to encourage the young in the delightful study of Ornithology.—C.

COLEOPTERA FOUND IN THE PROVINCE OF QUEBEC.

By WILLIAM COUPER.

- TACHINUS 1 fimbriatus, *Grav.*
2 fumipennis, *Say.*
TACHYPORUS 1 jocosus, "
2 acaudus, "
CONOSOMA basale, *Ericks.*
BOLETORIUS 1 cinctus, *Grav.*
2 cincticollis, *Say.*
3 bimaculatus, *Couper.*

The type of this species is in the Laval University Cabinet.

- QUEDIUS 1 melochinus, *Grav.*
2 fulgidus, *Fabr.*
3 capucinus, "
CREOPHILUS villosus, *Grav.*
LEISTOTROPHUS cingulatus, *Grav.*
STAPHYLINUS 1 maculosus "
2 badipes, *Lec.*
3 cinnamopterus, *Grav.*
4 violaceus, "
5 capitata, *Bland.*
6 fossator, *Grav.*
7 tomentosus "
8 varipes, *Sachse.*

- OXYPIUS ater, *Grav.*
PHILONTHUS 1 cyanipennis, *Fabr.*
2 aeneus, *Rosse.*
3 blandus, *Grav.*
4 ventralis, *Say.*
5 promptus, *Ericks.*
6 lomatus, "
7 fulvipes, *Fabr.*
8 longipennis, *Provancher.*

Is this specific name appropriate?

- XANTHOLINUS 1 cephalus, *Say.*
2 obsidianus, *Mels.*
3 hamatus, *Say.*
BAPTOLINUS melanocephalus, *Nord.*
CRYPTOBIUM 1 bicolor, *Grav.*
2 pallipes, "

- LATHROBIUM** 1 longiusculum, *Grav.*
 2 simile, *Lec.*
 3 puncticolle, *Kirby.*
 4 dimidiatum, *Say.*
LETHOCHARIS confluent, "
SUNIUS longiusculus, *Mann.*
PAEDERUS 1 littorarius, *Grav.*
 2 riparius, *Fabr.*
STENUS femoratus, *Say.*
OXYPORUS 1 rufipennis, *Lec.*
 2 stygius, *Say.*
 3 vittatus, *Grav.*
BLEDIUS 1 fumatus, *Lec.*
 2 semiferruginosus, *Lec.*
PINOPHILUS latipes, *Er.*
PLATYSTETHUS Americanus, *Erich.*
OXYTELUS rugosus, *Grav.*
ANTHOPHAGUS brunneus, *Say.*
ACIDOTA subcarinata, *Erich.*
LATHRIMEUM sordidum "
OMALIUM plagiatum, *Mann.*
ANTHOBIUM protectum, *LeConte.*
MICROPEPLUS costatus, "
HISTER 1 depurator, *Say.*
 2 fedatus, *Lec.*
 3 Americanus, *Paykull.*
 4 planipes, *Lec.*
 5 interruptus, *Beauvais.*
 6 bimaculatus, *Linne.*
 7 marginicollis, *Lec.*
 8 LeContei, *Mars.*
 9 attenuatus, *LeConte.*
 10 civilis, "
SAPRINUS 1 distinguendus, *Mars.*
 2 sphoeroides *Lec.*
 3 ferrugineus, *Mars.*
SCAPHIDIUM 1 quadripustulatum, *Say.*
 2 piceum, *Mels.*
MYCETOCHARUS bicolor, *Couper.*
 The type of this species is in the Cabinet of
 Laval University, Q.
OLIBRUS nitidus, *Mels.*
PAROMALUS bistriatus, *Er.*
DENDROPHILUS punctulatus, *Say.*
BRACHYPTERUS urticae, *Fabr.*
COLASTES truncatus, *Randall.*
CARPOPHILUS 1 niger, *Say.*
 2 brachypterus, *Say.*
 3 discoideus, *Lec.*
CONOTELUS obscurus, *Erichs.*
EPURÆA 1 rufa, *Say.*
 2 borella, *Erichs.*
 3 vicina, *Lec.*
 4 convexuscula, *Mann.*
NITIDULA 1 zigzag, *Say.*
 2 bipustulata, *Linn.*
- NITIDULA** 3 rufipes, "
LOBIOPA undulata, *Say.*
THYMALUS fulgidus, *Er.*
OSMITA colon, *Linn.*
PHENOLIA grossa, *Fabr.*
CRYPTARCHA ampla, *Erichs.*
IPS 1 fasciatus, *Olivier.*
 2 4-signatus, *Say.*
 3 sanguinolentus, *Cliv.*
 4 Dejeani, *Kirby.*
BACTRIDIMUM nanum, *Erichs.*
TROGOSITA 1 dubia, *Mels.*
 2 intermedia, *Horn.*
NOSODES silphides, *Newman.*
PELTIS 1 ferruginea, *Linn.*
 2 4-lineata, *Mels.*
CERYLON castaneum, *Say.*
SYLVANUS advena, *Erichs.*
NAUSIBIUS dentatus, *Schaum.*
CUCUJUS clavipes, *Fabr.*
LÆMOPHLEUS biguttatus, *Say.*
CORTICARIA cavicollis, *Lec.*
CATOGENUS rufus, *Fabr.*
PEDIACUS planus, *Lec.*
BRONTES dubius, *Fabr.*
PARAMECOSOMA serrata, *Gyll.*
ANTEROPHAGUS ochraceus, *Mels.*
CRYPTOPHAGUS cellaris, *Erichs.*
DERODONTUS maculatus, *Mels.*
LATHRIDIDIUS pulicarius, "
PSEPHENUS LeContei, *Hald.*
MYCETOPHAGUS 1 punctatus, *Say.*
 2 flexuosus "
 3 bipustulatus, *Mels.*
TRIPHYLLUS ruficornis, *LeConte.*
LITARGUS tetraspilotus, "
DIPLOCÆLUS brunneus, "
DERMESTES 1 lardarius, *Linn.*
 2 marmoratus, *Say.*
 3 talpinus, *Mann.*
ATTAGENUS megastoma, *Fabr.*
TROGODERMA ornata, *Say.*
ANTHRENUS varius, *Fabr.*
ORPHILUS ater *Erichs.*
BYRRHUS 1 Kirbyi, *Lec.*
 2 Americanus
NOSODENDRON unicolor, *Say.*
ONTHOPHAGUS ovatus, *Linn.*
CYTILUS alternatus, *Fabr.*
LIMNICHUS punctatus, *Lec.*
HELICHUS lithophilus, *Germar.*
STENELMIS crenatus, *Say.*
HETEROCERUS mollinus, *Kies.*
PLATYCERUS 1 quercus, *Weber.*
 2 depressus, *Lec.*
CERUCHUS piceus, *Weber.*

(Continued from page 155, No. 7.)

THE CANADIAN SPORTSMAN AND NATURALIST.

No. 10.

MONTREAL, OCTOBER, 1882.

VOL. II.

WILLIAM COUPER, Editor.

SINCE the first issue of this magazine, my object has been to produce original matter, cognizant that unless new material appear each succeeding month, the chance of success would be poor indeed. It is my intention to devote a portion of the journal to Entomological subjects—the study of insects at present occupies the attention of many intelligent men and women throughout the continent of America—therefore, I solicit correspondence of a popular nature from all quarters—north, south, east and west—regarding Entomological matters. My friends across the line, may rest assured that great care will be taken to avoid errors, and that communications for publication will be looked over as carefully as if revised by the author.

DEEP SEA FISHING.

Our American maritime neighbours are continually on the look-out for something new in the way of food fish; not satisfied with the products of inland waters to supply their customers, they regularly resort to the edge of the Gulf Stream for deep sea fishing; the latest haul being from a depth of one hundred and twenty fathoms, obtaining a new food fish said to be of great value. The specimens taken range from one to four pounds in weight; the flesh white and delicious. Dr. Baird, the Secretary of the Smithsonian Institution, will probably give an early report on this new addition to the fish *fauna* of the United States. The species will, doubtless, form a feature of interest at the Fisheries Exhibition in London next year. After all the boasted wealth of Canada as a fish-producing country, the greater portion of the fresh fish sold in Montreal and other Canadian cities, generally comes from Portland; and for all

that, large sums of money is annually granted to develop our maritime and inland fishing industries. It will be ere long acknowledged that American fishermen can show that they are far ahead of us in their plans to procure material to supply the continual drain upon their markets. The fishing industry of the State of Massachusetts alone is enormous; nothing on our marine waters can compare with it. There are characteristics in the Gloucester fishermen that are apparently wanting in many of our men who derive a living from the products of the sea. The former will risk everything and even go out of their latitude to obtain a new object in this line of trade, while the latter generally prefers to keep within their old landmarks, preferring to return to shore with a meagre catch, after undergoing the old style of misery which they are repeating and enduring every season of their existence. There is something radically wrong in the fishing systems pursued by the people residing on the Canadian sea coasts. The majority of these toilers from boyhood were compelled to follow this rough work for a simple sustenance, and consequently education was neglected. The attempts so far made to establish schools to enlighten the poor fisherman, have been few indeed. To my knowledge, but two schools exist on the Labrador coast, one of which is supported by a few friends in Montreal. The harvest of the sea is in the hands of monopolists who have no stake in the country, whose aim is to make money while fish bite and sun shines—caring not a cent how their men fare so long as the piles of fish go on increasing around their establishments. These companies, in my opinion, are liable and should pay a business tax. Their summer establishments are in the Maritime Provinces, while they reside comfortably during

winter in Europe. They should certainly pay for the privilege of squatting on our territory, and carrying off the best fish to foreign markets. As for the labour and system of pay the fisherman is ground down, doubtless, under a contract of dependence; his work from day to day is merely chance, and in many instances after the season is over, he finds himself in his employer's debt. This system of slavery should not be allowed; it is now time to expose it, and I trust that some philanthropist will take up this matter in the interest of the poor fellows who toil on the sea risking their lives for a mere existence. This disgraceful system of sweating the Canadian deep-sea fishermen should be thoroughly explained at the approaching International Fisheries Exhibition in London. A subject of this nature comes under class II, "Economic condition of Fishermen," section 4, "Contracts of Partnerships." The Committee offer a prize for the best essay on fishing industries, and as the matter is of great interest to Canada, some one should attempt it.—C.

DEPARTMENTAL BLUNDERS.

A New Brunswick Inspector of Fisheries has brought the Government into trouble by interfering with riparian rights. It appears that the Department at Ottawa in its efforts to enforce an order-in-council in direct opposition to the second section of the Fisheries Act and in defiance of the judgment of the Supreme Court of New Brunswick, which has recently been confirmed by the Court of Appeal at Ottawa, ordered this Inspector to follow out their instructions. The first suit was that of Spurr *vs.* Venning, which we believe went to appeal. Three suits have since gone against the Department, viz., J. H. Phair, Esq., of Fredericton *vs.* the Inspector of Fisheries, for seizing his fishing tackle; Mr. Phair's damages amount to \$511. The second suit was brought against the same officer for the same action, by Judge Steadman, and resulted in a verdict for damages to the extent of \$3,000. The third suit was brought by Mr. Hanson, of the Crown Lands Office, against the same officer for a similar seizure, and a verdict was given for \$1,000

damages. In all the Department will have to pay \$5,731 for ordering an officer to carry out the instructions of the Government. The above does not include the costs. All this through ill-considered instructions submitted by the Minister at a meeting of Council from whence the order emanated.—C.

ORNITHOLOGICAL QUERIES.

Young Pigeon Hawks (*Hypotriorchis columbarius*, Gr.) were abundant in the Province of Quebec this year. Can any of our correspondents give us additional information regarding the nidification of this species?

A Whip-poor-will (*Antrostomus vociferus*, Bonaparte) was shot lately by W. H. Rintoul, Esq., on the south side of the St. Lawrence, not far from the river. It is in this year's plumage, indicating that it was bred not far from the Island of Montreal. Have the notes of the Whip-poor-will been heard on the Island?

Can any of our readers give us the chemical composition of the saliva used by the Chimney Swallow to build its nest? Why does this Swallow prefer breaking off dead twigs from a tree by force of flight in preference to selecting the same kind of branches which have fallen to the ground?

We notice the Purple Martin (*Progne purpurea* Boie.) every summer in the neighborhood of Montreal. Can any person inform us if they nest on the Island?

How far east in Ontario has the nest of the Ground Robin or Towhee Bunting been found?

Did anyone discover the nest of the Western Grebe (*Podiceps occidentalis*, Lawr.) nesting in the Province of Quebec? The young birds are shot sometimes near Montreal in the fall.—C.

NATURAL HISTORY NOTES.

BY THE EDITOR.

Mr. F. B. Caulfield, a member of the Montreal Branch of the Entomological Society of Ontario, obtained the prize at the late Montreal Exhibition for a collection of insects methodically arranged, illustrating the native species injurious to vegetation.

One important omission, probably not thought of, at the late election of officers of the Province of Quebec Forestry Association

is the appointment of an Entomologist. Trees during their growth are more or less subject to the depredations of insects, therefore enquiry will be made regarding the cause. If the Association is to be extensive and successful in their work, the nomination of an honorary consulting Entomologist should not be neglected. The planter is not generally supposed to understand the internal and external diseases of trees in this latitude. It is not too late to remedy the oversight.

I wish to call the attention of Ottawa entomologists to a Hymenopterous gall found by me some years ago near Billing's Bridge. It attacks the roots of a species of *Rubus*. See "Canadian Entomologist," vol. II., pages 68-98. During the late meeting of the American Association for the Advancement of Science in Montreal, in conversation with Mr. Bassett on the subject, he informed me that the gall has not been rediscovered since, and that he is anxious to obtain specimens. Will some one connected with the Ottawa Field Naturalists' Club endeavour to find the gall? He will be greatly pleased if some entomologist devotes a little time in the search. Mr. Bassett is working on the genus *Diastraphus*, and the root-galls of *Rubus* would form quite a valuable addition to American literature on the subject.

In an article on the milk plant and its insect parasites, page 10, vol. I, "Canadian Sportsman and Naturalist," I made out a list of insects which either live on its roots or on the leaves when the plant is progressing towards maturity. So far, I have shown that the milk plant (*Asclepias*) supports insects which are remarkable for two definite colours, red, (reddish-orange) and black. An addition is made this year in the form of a tufted caterpillar *Euchates egle*, Drury, which is also red and black. The common *Asclepias* of Montreal mountain was literally covered with these caterpillars in August, 1882. I collected a number of these larva, some of which formed

cocoons. On the 10th September, a Dipterous fly emerged from one of these cocoons which corresponds to the description of the male of *Tachina* (*Lydella*) *doryphora*, Riley, which preys on the larvæ of the Colorado potato beetle. This being a prolific year for *E. egle*, I am anxious to hear of my confreres' experiences in rearing the moth, and especially regarding its parasites in the caterpillar state.

In a skin of a Grizzly Bear examined lately I found several pods of a prickly vetch or pea imbedded in the hair. Each pod contained from two to four peas, evidently in the best state of preservation. Here we find a bearskin carrying healthy seed—probably many days since the animal was shot near the Rocky Mountains—after undergoing the process of dressing. I have noticed some curious ways by which seeds of plants have been distributed, but the present instance is certainly extraordinary. The little pods were found at the base of the hair on the posterior sides of the skin of the animal. They evidently attach themselves to the hair like the seed of the common burdock, but the latter becomes matted in the fur. These pods seem to have a creeping power, as they are covered with numerous spines, some of which are hooked at the point, and they were all found at the base of the hair, from which they were extracted with difficulty. I notice this peculiar mode of seed distribution in order to ascertain if others detected similar circumstances in the hair of quadrupeds.

Speaking of Wasps' nests, at page 150 of "Packard's Guide to the study of Insects," published in 1869, he says that "no parasites have been as yet detected in this country." I look on "this country" entomologically, as embracing the limits of Dr. Le Conte's geographical distribution of Coleoptera—i.e., from the Gulf of Mexico to the Arctic Circle—a plan which Dr. Packard follows in his Guide—therefore Canada is within the meaning of

the term "this country." By referring to page 104 vol. I, "Canadian Entomologist," a description will be found of *Euceros burrus*, Cresson, found by me as a parasite in the nest of *Vespa maculata*, at Ottawa, in October, 1868. I had, at the latter date, discovered a second species attached to the cells of paper-making wasps found near Ottawa, which shows that Mr. Packard should have at least remarked the discovery of one species in this country. My Ottawa friends should look out for the other forms parasitic on wasps occurring in their neighbourhood.

Entomologists please make a note of what Vennor wrote to the Montreal *Witness* on September 1st. He says that "the woods along this portion of the Maine coast are everlastingly green—being of pine—and this color is not much affected by heat or drought. In these woods there is ample scope for the entomologist in studying the habits of the pine-boring beetles which abound. They are still hard at work cutting off the tops of the branches and boring down into the soft pith, in which they deposit their eggs." Entomological knowledge is not advanced one iota by the above. I am loth to make remarks on the subject; but in the first place, to show the ignorance of the writer, I say that the pine boring beetles do not cut off the branches of pine trees, neither do they deposit their eggs in the pith. In fact, the pine-boring beetles will not attack a perfectly healthy tree (if they did there would not be many living trees in the forests to-day) but the moment that decay shows itself, then the parasites appear and the work of destruction commences, not in the living branches, but in the dead wood—the solid trunk. My friend Vennor better let Entomology alone; to commence dabbling into it at this age of this science, will not only be a source of annoyance to himself, but to those actually making it a study; the latter can manfully stand up and tell the truth as there is nothing to be gained from stating otherwise. Vennor's story of the pine woods on the coast of Maine appears similar to that

related by an ordinary educated European from a ship's deck when passing the Island of Anticosti in June; the landscape looks green and therefore beautiful; there is something enchanting about it, but the eyes of the stranger are deluded; he merely passes by, carrying impressions of his first visit to a new country. That is all—with the exception that he did not see the pine-boring beetles.

In skinning an adult grey squirrel, on the 21st September, a larva of a bot-fly was found beneath the skin, half way between the cheek and upper frontal part of the femora of the right fore leg. The larva (maggot) at this date, measures 7-8 inch long, covered with numerous rust-coloured dots and short stiff hairs. The mouth is provided with two sickle-shaped teeth. The insect belongs to the Order DIPTERA: Family OESTRIDÆ: Genus *Cuterebra*, i.e.—subcutaneous bots beneath the skin of animals. The hole made by the larva measures 2-8th inch in diameter. This insect, it is said, inserts the egg (in fact it is possible that some of the insects belonging to this class of Diptera may be viviparous, nevertheless the wound made by so small an object after its insertion into the animal's skin, would not probably produce sufficient irritation to cause trouble, but when the wound is thoroughly enlarged by the maggot becoming longer and wider, the poor squirrel must suffer while it occupies the cell,) into the squirrel's skin, just in a place where the animal cannot easily reach it with its tongue, and after the parasite penetrates to a sufficient depth, all effort made by the squirrel to destroy the cause of irritation is ineffectual, until the insect attains its perfect larval form, when it ceases to annoy the animal by leaving it altogether.—*Gastrophilus equi*, Fabr, is the species which we call the Horse Bot-fly, and I have known an instance of this insect finding its way into the stomach of a man who resided at Stoneham, north of Quebec. The fly deposits its eggs on the horse's body where the animal can reach

them with its tongue, thereby conducting the eggs into its stomach. This man, after giving his horse water from a pail, foolishly drank a portion of it himself, therefore taking into his stomach a number of Bot-fly eggs which became detached from the horse's lips. Of course he became sick and after suffering days of pain, resorted to an over dose of whisky as the only remedy at hand, when he vomited a number of larva which were sent to me and which I pronounced to be the Horse Bot-fly. There are cases on record of man's death caused from carelessness in drinking water after his horse. Dr. Wright of Toronto has a man's liver in spirits, which is full of larva of the Horse Bot-fly. People cannot be too careful in matters of this kind; it should at least be known that insects which can withstand the temperature of a horse's stomach, may also habituate themselves to live in the larva state in the stomach of man; therefore I say, no matter how clean the exterior skin of the horse may appear, never drink water from the same vessel from which your horse drank. The genus *Cuterebra* are those which seem of interest to us at present. We are anxious to procure further information regarding those that are parasitic on the wild quadrupeds of our forests—such as deer, bear, wolverine, ground-hog, squirrels, hare and the wood-mice. One species *Hypoderma tarandi*, Linn, is said to infect the reindeer. The genus *Æstromyia* is thought to inhabit the hare. Of the former genus, Dr. Fitch described a species *Cuterebra emasculator*, Fitch, which lives in the scrotum of the black squirrel, which it is known to emasculate. *C. buccata*, Fabr., inhabits the body of the striped squirrel; it generally attacks the animal in the region of the kidneys.

Butterflies belonging to the genus *PIERIS* (one of the species destroys cabbage in the vicinity of Montreal) were not generally supposed to feed on plants far removed from the latter. In the last number of "Papilio," a proficious magazine devoted to the study of

Butterflies and Moths, edited by Mr. Henry Edwards of New York, I notice an elaborate paper from the pen of my old correspondent R. H. Stretch of San Francisco, Cal. It appears that Dr. Hagen of Cambridge, Mr. S. Henshaw of the Natural History Society of Boston, Mass., and Mr. Stretch, three Entomologists, accompanied the U. S. North Transcontinental Survey this summer. At Spokane Falls, Washington Territory, in July, at an altitude of 1900 feet above the sea, they discovered and partially studied the habits of *Pieris monapia*, Feld., var. *suffusa*, Stretch. During the latter month "the air was alive with butterflies flitting round the pines in countless numbers, and glistening against the dark green of the young timber like the most delicate snowflakes. Some idea of the immense numbers of the insect may be gathered from the fact that in the infected district, on every little pine, though not more than two feet high, each terminal branch of needles, from one to twelve larvæ or pupæ could be counted, and every weed could show its quota of pupæ." The trees which this butterfly destroys in Washington Territory are the Balsam Fir (*Abies balsamii*), the Tamarac (*Pinus contorta*), and the Yellow Pine (*Pinus ponderosa*). "The area actually visited, where serious damage has already been committed, extends about twenty-five miles north and south, with an unknown width, and in this region all the Yellow Pines have been nearly or totally stripped of their foliage, as well as many of the smaller species of *Conifera*. The first impression was that fire had scorched the tops of the trees, so brown and withered did they look in their clothing of dark, blackish moss; and before the cause of this effect had been discovered, it was only by persistently remembering that all the large fir trees were green that the idea could be kept out of the mind." Now this insect occurs in California and Vancouver's Island, and "is evidently of very wide distribution, latitude in the north taking the place of altitude in the south, and consequently the same phenomena which we are here called to note may occur in localities where the timber is both denser and more valuable." It will be a poor lookout for our forest pines if this butterfly visits the Dominion, and I cannot see that its further northern course can be prevented; although a delicate butterfly, it has better facilities of coming here than the Colorado beetle had. Yet it may be presumed

that so long as it is not kept down by birds, bats and insect parasites in its present home, it will probably keep within the territory which it now devastates. It appears that nature has supplied this butterfly with an abnormal habit hitherto unknown to the genus on this continent—that of descending from the branches to the ground by means of a silken thread.

THE AMERICAN SNIPE.

(*Gallinago Wilsonii*, Bon.)

The arrival of snipe with us in the spring is very uncertain, but depends entirely upon the state of the season. If the spring opens late they remain here but a few days, passing hurriedly to their breeding grounds in the far-North. On their return from the north with their young, they pay us a visit before going south, reaching us in September; the first cool weather having prompted them to seek winter quarters. They make their autumnal migrations in stages in advance of hard freezing, stopping and resting on the route. The snipe lies best to a dog on warm sunny days, when gentle winds are blowing, and if feeding in high tussock meadows will sometimes not take flight until nearly trodden upon. But during blustery weather, especially if the wind is from the north-east, they are very loth to allow even the most steady dog to come within thirty or forty yards of them. This is more noticeable in the spring, when the birds have first arrived, and are in wisps or bunches, than in autumn, when they appear to have made up their minds to stay for a while previous to moving southward. Sometimes, particularly on a dark drizzling day, which is the weather they prefer for their flights, the flushing of one bird will be the signal for every snipe in the field to rise with a sharp "skeap," "skeap," and the air will be filled with their bleating and their irregular flights. Perhaps they will join in a flock and fly beyond the range of vision or again individual birds may drop with their peculiarly rapid descent until all have settled again. There is no difficulty in marking down a snipe, their quick, dropping motion is unmistakable. Beating for snipe with the wind at one's back, has always been advised by experts, as the bird invariably rises against wind, and flies at an angle towards you, either to the right or left, thus presenting a more easy shot than when going straightaway in a zigzag course. Frequently when flushed, a bird will dart away, flying low at first, but

gradually rising will soon seem but a speck in the sky, and then disappear from view, let the hunter keep for a few minutes his position, and quick as flash the bird may drop down within a few yards of his former resting place. This is not always the case, however, as often the snipe may leave not to return. The probable explanation of this is, that in the first case the ground from which the bird was driven afforded good food and cover, and the snipe was loth to desert so attractive a spot. In our estimation no sport is comparable to an October day with the snipe if they be tolerably plenty. Undoubtedly the perfection of snipe shooting is had in Florida during the winter months. In some places so thickly do they congregate that a dog is an impediment rather than a help, though a good retriever is very useful when there is much water.

THE GOLDEN PLOVER.

(*Charadrius Virginicus*, Borck.)

This is a fine game bird, confined neither to the interior nor to the coast alone. None of our game birds seem to be more generally known, for it is scattered apparently over the whole face of the land—from the fur countries to the Gulf, and from ocean to ocean—breeding in the most northern portions of the continent, to which they annually repair about the beginning of May, and commence their return journey during September. These birds, though naturally timid, and usually very shy of the approach of man, are easily reached, provided the proper precautions are taken by the hunters. In the Western States and prairie land where there is no cover for the gunner they are usually shot from waggons; and from their apparent inattention to enemies thus equipped, it would seem that their fear of humanity is limited to man in his primitive condition only, for after volley upon volley has been poured into their ranks with deadly effect, they pass along in unbroken line only to receive another cross shot in their next circuit of flight as they pass over a favorite feeding place of newly ploughed ground or in a grasshopper or cricket range. In the autumn, and more particularly after a protracted drouth, these birds resort regularly to the sand beaches or rocky points of the nearest streams for the purpose of washing and quenching their thirst. As the flock comes into sight a shrill whistle is usually the first welcome, then the chorus of a hundred

voices chime in as though rejoicing at the sight of the liquid element. Such is their ecstasy as they wheel around over their favorite bar, and such their utter disregard to the booming of guns, that dozens are dropped upon the water, the wounded fluttering in every direction, while the column wheels into line again right over the spot where its dead and wounded companions lie, only to be thinned again and again, until finally driven away. Ordinary precautions seem forgotten or abandoned by these birds when approaching a favorite watering place; and when met with under such circumstances it is conclusive evidence that they have not been long from the breeding grounds, and that most of them are young and inexperienced.

Correspondence.

ANSWER TO CORRESPONDENTS.

R. McK., Newcastle, N.B.—If you possess "Packard's Guide to the Study of Insects," you have the best work for a student of American Insects. "Harris' Insects injurious to Vegetation" is an accurate work, but we have no book published in the United States or Canada specially devoted to one order of insects. There are seven distinct orders of insects, all of which are largely represented in America, and it will require many more years of collecting and careful investigation before we can obtain separate works on the orders of American insects. You do not inform us what order you study. Let us know, and we may lead you to obtain information. In regard to English names for our insects, we question if they can be applied even to the butterflies of this continent. The extent of territory is so great and the species so diversified that Mr. Scudder of Boston, an eminent entomologist who attempted it is now ridiculed for so doing. Latin names are certainly preferable and more simple, especially for classification, and a child can learn and retain them almost as easily as a dressmaker remembers the names of the paraphernalia of her business.

SIR,—In the last issue of THE CANADIAN SPORTSMAN AND NATURALIST, a copy of which is before me, I notice the following article under the signature of "C":—"The Sherbrooke Examiner of the 14th ultimo, made a charge against Mr. W. C. Willis, Fishery Overseer, for granting permits to take salmon from the tributaries of the St. Francis River with 'fly and minnow.' I beg to state that no such article as the above ever appeared in the Examiner or any other paper, consequently there is no truth in it; it is purely a stretch of the imagi-

nation of the writer. Among other extraordinary things he alleges that W. C. W. took the "Star's sport by the nose!" And becoming somewhat mixed, he says, "some one in the Department must have given liberty to catch salmon in the two rivers, and if any one give additional information as to the facts, the subject matter will be properly sifted." As the Department, or any one else, never contemplated giving any such liberty, there can be nothing to "sift." The entire article exhibits great want of candor or ignorance, or something best known to the writer. W. C. W.

Sherbrooke, 2nd October, 1882.

NOTE.—Since the inception of THE CANADIAN SPORTSMAN AND NATURALIST, articles bearing the signature "C" have been written by the Editor. The first remarks coming under our notice relative to granting permits to take salmon on the St. Francis river appeared in the Star, who quoted the Sherbrooke Examiner. Subsequent seemingly corroborative statements were published in the Star, under the signature "One who has caught salmon with a rod." This was followed by a letter from "W. C. W.," an extract from which is given in last month's issue of this journal, wherein he says that "the Fisheries Department, as a great favour, granted fifteen days to catch a few salmon by the only means they can be taken in that river." There is no stretch of imagination or anything mixed in the matter on our side of the fence, but the correspondence indicates something wrong. May we ask if "W. C. W." wrote that letter to the Star, where it is stated that "the most fascinating fly has been thrown across them, but all in vain, not a rise can be got, though the burnished sides of the tempting beauties are plainly visible beneath the current." How can "W. C. W." harmonize the statement of a fifteen days' grant to catch salmon in the St. Francis, with the last paragraph of his above letter? Does he wish to take the Editor of this journal by the nose? In regard to "W. C. W." taking the Star's sport by the nose, literal phrases are generally used metaphorically, therefore the ontology has no existence unless "W. C. W." wrote that letter.—C.

COLEOPTERA FOUND IN THE PROVINCE OF QUEBEC.

BY WILLIAM COUPER.

ONTHOPHAGUS latebrosus, Strum.

APHODIUS 1 fossor, Linn.

2 fimitarius, Linn.

3 ruricola, Mels.

4 granarius, Linn.

5 inquinatus, Herbst.

6 vittatus, Say.

7 foetidus, Fabr.

ATGENIUS stercorator, *Fabr.*

EUPARIA gracilis, *Lec.*

ODONTAEUS filicornis, *Say.*

GEOTRUPES 1 splendidus, *Fabr.*

2 Blackburnii, "

3 excrementi, *Say.*

4 egeriei, *Germar.*

NICURGUS obscurus, *LeConte.*

TROX 1 sordidus, "

2 capillaris, *Say.*

3 porcatus, "

4 terrestris, "

5 aequalis, "

EURYTOMIA Inda, *Linn.*

HOPLIA 1 trifasciata, *Say.*

2 modesta, *Hald.*

DICHELONICHA 1 elongata, *Schoen.*

2 linearis, *Gyll.*

3 albicollis, *Barn.*

SERICA 1 vespertina, *Schoen.*

2 sericea, *Ill.*

3 iricolor, *Say.*

4 trochiformis, *Burm.*

DIPLOTAXYS 1 tristis, *Kirby.*

2 liberta, *Germ.*

LACHNOSTERNA 1 cognata, *Barn.*

2 ilicis, *Knock.*

3 hirticula, "

4 balia, *Say.*

5 fusca, *Frohl.*

POLYPHYLLA variolosa, *Hentz.*

ANOMALA varians, *Fabr.*

LIGYRUS relictus, *Say.*

APHONUS frater, *Lec.*

CREMASTOCHILUS, *Harrisii, Kirby.*

OSMODERMA 1 scabra, *Paliss.*

2 erimicola, *Knock.*

TRICHIVS 1 affinis, *Gory.*

2 piger, *Fabr.*

CHALCOPHORA Virginica, *Drury.*

DICERCA 1 divaricata, *Say.*

2 tenebrosa, *Kirby.*

3 tuberculata, *Say.*

4 lacustris, *LeConte.*

5 prolongata, "

6 obscura, *Fabr.*

EUPRISTOCERUS cogitans, *Web.*

ANCYLOCHIRA rusticorum, *Lec.*

PECILONOTA cyanipes, *Say.*

ANTHRAXIA subaenea, *Lec.*

BUPRESTIS 1 fasciata, *Fabr.*

2 sexplagiata, *Lec.*

3 lineata, *Fabr.*

4 maculiventris, *Say.*

5 Nuttalli, *Kirby.*

6 striata, *Fabr.*

MELANOPHILA 1 longipes, *Say.*

2 fulvogutta, *Harris.*

3 Drummondi, *Say.*

CHRYSOBOTHRI 1 chrysoda, *Ill.*

2 quadreimpressa, *Lap.*

3 dentipes, *Germar.*

4 femorata, *Fabr.*

5 soror, *Lec.*

6 trinervia, *Kirby.*

AGRILUS 1 gravis, *Lec.*

2 otiosus, *Say.*

3 politus, "

4 biliniatus, *Weber.*

5 viridifrons, *LeConte.*

6 fulgens, "

BRACHYS ovata, *Weber.*

TROCHUS Chevrolati, *Baw.*

MICRORHAGUS imperfectus, *Lec.*

FORNAX 1 cylindricollis, *Say.*

2 Orchesides, *Newman.*

EPIPHANIS cornutus, *Eschs.*

ADELOCERA 1 pennata, *Fabr.*

2 aurorata, *Say.*

3 marmorata, *Fabr.*

4 brevicornis, *Lec.*

5 impressicollis, *Say.*

ALAU 1 oculatus, *Linn.*

2 myops, *Fabr.*

CARDIOPHORUS 1 cardisce, *Say.*

2 amicus, *Mels.*

3 convexulus, *Lec.*

CRYPTOHYPNUS 1 abbreviatus, *LeConte.*

2 grandicollis, "

3 bicolor, *Esch.*

4 pulchellus, *Linn.*

5 pectoralis, *Say.*

CEOSTETHUS femoralis, *Lec.*

ELATER 1 linteus, *Say.*

2 semicinctus, *Rand.*

3 apicatus, *Say.*

4 phoenicapterus, *LeConte.*

5 luctuosus, "

6 fuscatus, *Mels.*

7 nigricans, *Lec.*

8 pedalis, *Candeze.*

9 lacustris, *Lec.*

10 sanguinipennis, *Say.*

11 rubricus, *Say.*

12 obliquus, "

13 protervus, *Lec.*

14 nigricollis, *Germ.*

15 pullus, *Cand.*

16 miniipennis, *Lec.*

LUDIVS abruptus, *Say.*

DRASTERIUS dorsalis, *Say.*

(Continued from page 172, No. 9.)

THE CANADIAN SPORTSMAN AND NATURALIST.

No. II.

MONTREAL, NOVEMBER, 1882.

VOL. II.

WILLIAM COUPER, Editor.

FALL SHOOTING.

Canadian sportsmen have had a good fall for woodcock shooting, although poor for snipe, along the shores of the St. Lawrence, on account of high water—the latter kept in the woodlands and fields during daytime,—visiting the marshes at sunset. Duck shooting was poor until the end of October on account of mild weather, but some good bags of black duck were made on Lake St. Peter and the Upper Lakes. Fall ducks began to arrive in large numbers at the end of the month, and some good bags were made on the above Lakes. We have been informed that large flocks of geese were lately seen on Misisquoi Bay. The Lake of Two Mountains is a favorite resort for wild geese during November, and we will, doubtless, hear of some good sport in that locality. Messrs. Dunlop and Wintle shot at St. Barthelemi for four days during the first week of October, killing seventy duck, thirty-six snipe, fifteen jack-snipe and two loons, one of the latter being a young black-throated loon, a rare bird on the St. Lawrence. Among the above number of duck, thirty-five were black duck. This is the largest bag made at the latter-place with two guns, for the time, at that season. Virginian deer are said to be numerous in their old resorts, but the weather during October, was unfavourable for the preservation of venison, hunters are therefore holding back until they obtain a more steady lower temperature. We expect to see venison sold at a reasonable price before the season closes. Results of game bagged during the present season will be of value to sportsmen, and we invite those who have been successful in making good bags, to send us reports for publication.

THE DOMINION KENNEL CLUB.

A meeting of the Fish and Game Club for the Province of Quebec, was held in their club room, 366 Notre Dame street, Montreal, on the 27th ult. Mr. L. A. Boyer occupied the chair. Mr. B. H. G. Vicars, Secretary-treasurer of the Kennel Club, was present and explained the constitution and objects of the Club. He said that the Club was organized as a joint stock company with shares of \$10 each. Its main objects were both national and local, and aimed at encouraging sport of a legitimate character, preserving the game laws and amending them in some particulars. The Club intended also to publish a stud book at a nominal figure, to encourage bench shows and field trials, to hold an international show in conjunction with English sportsmen, and to arrange for exhibitions of sportsmen's materials for the purpose of encouraging the manufacture of these goods. A kennel would also be established at Ottawa for the importation and propagation of a superior class of dogs, and a lot of land had been secured on the Rideau Canal for this purpose. An attempt would also be made to remedy the defects in the game laws, and see that they were properly enforced. A number of those present expressed themselves as heartily willing to co-operate in furthering the objects of the Kennel Club. Mr. Vicars said he was perfectly willing to leave the matter in the hands of the Fish and Game Club, and suggested the appointment of a committee to consider the subject. On motion of the chairman, seconded by Mr. Matthews, the following committee was appointed to secure applications for stock, and to appoint a local board for Montreal:—Messrs. Geo. U. Ahern, J. B. A. Beique, J. A. U. Beaudry, F. J. Brady, Thos. Costen, H. A. Hogel, W. Mackenzie and John Nelson. Mr. Nelson was elected secretary of the committee.

We are pleased to notice the organization of the Dominion of Canada Kennel Club, who will doubtless carry out its object of encouraging sport of a legitimate character. The game laws of the Provinces of the Dominion are far from being intelligent or easily interpreted. Instance the late amended game laws for the

Province of Quebec. If the Club can only arrive at a proper way to remedy the present defects in the laws affecting our game, they will certainly benefit all honest sportsmen. Our animals, from which the hunter derives pleasure, should be properly defined; their historic names ought to appear in the law in order to conjoin a proper nomenclature of the game *fauna* throughout the Dominion. The animal called an elk in the west, is not the elk of the Province of Quebec; in fact the animals belong to two distinct genera, and as different in form as a buffalo is from a deer. We know that when a number of intelligent sportsmen meet to form laws of this nature, their decision will be generally correct; in fact, more so than the poor attempts so far made by any party in a Provincial Parliament. The proceedings of the Michigan Sportsman's Association have shown this to be the case, and we trust that the above combined Clubs will follow their example.—C.

The ruffed grouse commonly known as partridge, are not reported abundant near Montreal this fall. A person must now go to the Laurentian Mountains, otherwise the chance of obtaining the ruffed beauties on the low woodlands, will be poor indeed. The few birds noticed on the island, may have been bred on Mount Royal, where all birds, even hawks and owls are protected. To our knowledge, about a dozen brace have brought up their broods on the three conjoined mountains this past summer. On the morning of the 14th ult., a young male ruffed grouse flew against one of the windows of Mr. Walter Paul's grocery in this city; it was killed by the concussion. We conjecture where this bird came from, and, moreover, believe that all the birds bred there, when strong enough, leave for other localities where they winter without being so much molested.

Thousands of black squirrels have been killed near Hornellsville, N.Y., during the

month of October. The grey variety were abundant throughout the Eastern Townships this fall. The species (black and grey being the same) migrate, and they, doubtless, took advantage of the late beautiful October to reach new localities. The specimens which we obtained from the townships, were fat and excellent eating.

A FINE specimen of the Snow Owl was shot near the Grand Ligne Depot on the 20th ult., and a Pine Grosbeak was taken near Montreal on the same date. The arrival of these birds from the far north indicates the approach of cold weather.

THE attention of Entomologists is called to the fact that the collection of THYSANOPTERA (Thrips) of this country have been neglected. Mr. Theo. Pergande, of Washington, writes to say that "there seems to be nobody among the entomologists in this country who takes an interest in this group of insects." Mr. Pergande is now studying THYSANOPTERA, and he will be pleased to receive specimens from all parts of America. His address is 614 Seventh street, S.W., Washington, D.C., U.S.

REVIEW.

"The Ottawa Field Naturalists' Club" Transactions No. 3, for 1881-2, are full of interest to the general student of Canadian Natural History. The success of this institution is doubtless due to Mr. James Fletcher, its worthy president, who, in his genial way, manages to keep the Ottawa naturalists constantly at work. We have reports from the Leaders of the different branches of Natural History. In a list of birds said to have been shot in the vicinity of Ottawa, I notice *Harporhynchus cinereus*, Bd. (The St. Lucas Thrasher), which may be a var. of the common Brown Thrush, (*H. rufus*); *Polioptila caerulea*, Sclater, (the Blue-gray Gnatcatcher); *Parus rufescens*, Towns. (the Chesnut-backed Chickadee); *Coccyzus Americanus*, Baird (the

Yellow-billed Cuckoo); *Glaucidium passerinum*, var. *Californicum*, Ridgway (Pigmy Owl;) according to Ridgway's List, there are only two species of this genus in North America. The *G. gnoma*, Wagl., is a California bird, and its occurrence in the vicinity of Ottawa is doubtful. *Nauclerus furcatus*, Vigors (the Swallow-tailed Kite). This genus is now changed to *Elanoides*, and Ridgway gives it in his List as *forficatus*. Vigors should not be quoted as the authority, as it is Linnaeus' type of *Falco furcatus*; and *Porzana Jamaicensis*, Cassin (the Little Black Rail)? With the exception of the Thrush var., the Gnatcatcher and the Yellow-billed Cuckoo, this is the first record of the occurrence of the above birds in this portion of Canada, and it is strange that no determinate remarks appear in the report regarding them. Are these birds preserved, and where are they to be seen? A descriptive paper by J. B. Tyrrell, B. A., on SARCOPTIDÆ, or parasites found on Canadian Birds, is accompanied with illustrations. Dr. Cowdry, of Toronto, is at present at work on this class of ectoparasitic forms which he mounts for the microscope. 'Notes on the Ottawa Unionidæ,' by F. R. Latchford, is a good contribution to our conchological literature.—*Unio borealis*, A. F. Gray, is illustrated as a new species from the Ottawa River. There are other papers of equal value and interest. In conclusion, the work is in a high degree creditable to the Club, which should be encouraged for their industry and intelligence.—C.

Correspondence.

DEAR SIR,—I send you enclosed three specimens of a peculiar hammer-headed fly, which I see here every year about this time on the side of a house. These pretty little flies have the curious habit of collecting into a dense mass as evening draws on. I have noticed them, night after night, for the last three weeks, in the angle made by two brick walls beneath the porch of a doorway. During the daytime they are very bright and active,

and front round immediately a hand is raised towards them. The easiest time to catch them is at night when they are at rest. I have no copy of Say, but I think I remember seeing it figured towards the end of one of the volumes. I shall be obliged if you will send me the name, and if it is a rarity, I shall be pleased to send you a good series of specimens.

I am, dear sir, your truly,

J. FLETCHER.

Ottawa, Oct. 17th, 1882.

NOTE.—The fly belongs to the Dipterous genus *Sphyracephala*. The North American species are rare. It may be Say's *brevicornis*, but I have no immediate opportunity to compare it with the description. If it is not the latter, you may have a new species. I trust you secured a number of them. The genus is remarkable for its stalked eyes which are placed on stems going out from the sides of the head. Some species are found fossil in Prussian amber.—C.

LIST OF THE BIRDS OF WESTERN ONTARIO.

By J. A. MORDEN and W. E. SAUNDERS.

The following list has been prepared chiefly from observations made at and near Hyde Park, London, Mitchell's Bay, Point Pelee; and Lucknow.

Hyde Park and London, in Middlesex county, are in the centre of a large and fertile agricultural district abounding in woodland birds. Mitchell's Bay at the St. Clair Flats and Point Pelee are also rich in woodland birds, and besides are noted for their water birds; while Lucknow in Bruce county is farther north, and therefore a greater number of the northern forms breed there, while some of the southern are wanting entirely.

To Mr. E. W. Sandys, Chatham, Ont., we are deeply indebted for his valuable assistance, more especially among the water birds, but also for the only records of a few land species.

It is hoped that the publication of this list, will draw from others in Ontario, criticisms and additions to our *fauna*, together with more exact knowledge about many of our rarer species.

The nomenclature adopted is that given by Ridgway, in the Smithsonian Catalogue of 1881.

1. *Hyllocichla mustelina*; Wood Thrush. Fre-

quent in Middlesex in heavily timbered woods. In Kent, breeds abundantly.

2. *Hylocichla fuscescens*; Wilson's Thrush. Breeds abundantly.

3. *Hylocichla ustulata Swainsoni*; Olive-backed Thrush. Very rare in migrations near London; only one shot; more are found in Kent where it may breed; several seen May 19th, 1882.

4. *Hylocichla unalascae Pallasi*; Hermit Thrush. Regular migrant. Found common in full song in a large swamp, June 22nd, 1882. No nests found, although it was undoubtedly breeding. None observed in summer in any other locality.

5. *Aicrula migratoria*; Robin. Breeds abundantly. In very mild winters a few remain.

6. *Mimus polyglottus*; Mockingbird. One taken in June, 1860 at Chatham. (E. W. Sandys).

7. *Galeoscoptes Carolinensis*; Catbird. Breeds abundantly. Five eggs not an uncommon set.

8. *Harporhynchus rufus*; Thrasher. Much less abundant than the last. Seems to be very locally distributed, frequenting low scrub and hazel thickets; breeding in brush heaps, bushes and on the ground impartially.

9. *Sialia sialis*; Bluebird. Breeds abundantly. Earliest eggs, 11th April, 1877; largest set, seven; four sets of white eggs taken.

10. *Poliophtila cærulea*; Blue-gray Gnatcatcher. Generally common, and well distributed through high woods, but some seasons rare.

11. *Regulus calendula*; Ruby-crowned Wren. Common. Arrives from the north early in October, and in mild winters remains, leaving about May 1st.

12. *Regulus satrapa*; Golden-crowned Wren. More common than the last, with same habits. Male in full song shot in a swamp near Lucknow, Bruce County, May 21st.

13. *Parus atricapillus*; Chickadee. Very common in spring and fall; less so in winter, and a few remain through the summer and breed.

14. *Sitta Carolinensis*; White-bellied Nuthatch. Like the last, only more abundant in summer, and less so in winter. Never makes holes for itself for breeding purposes.

15. *Sitta Canadensis*; Red-bellied Nuthatch. Rare; our few have been taken early in May.

16. *Certhia familiaris rufa*; Creeper. Common, except in summer when a few breed. Nests are placed behind a large flake of bark on the side of a tree.

17. *Troglodytes ædon*; House Wren. Common. Breeds. Snake skins are a common ingredient of country nests.

18. *Anorthura troglodytes hyemalis*; Winter Wren. Common in spring and fall. A few breed in wooded swamps.

19. *Telmatoctes palustris*; Long-billed Marsh Wren. Breeds very abundantly in the St. Clair

marshes, but in smaller inland marshes is very rare.

20. *Cistothorus Stellaris*; Short-billed Marsh Wren. Rather common in the St. Clair marshes; a set of five eggs, the size and shape of those of this species, white and sparingly dotted with the color of those of the other species, was taken at the St. Clair marshes June, 1881, and probably belong to this species.

21. *Anthus ludovicianus*; Titlark. Abundant at times in fall and spring; seen as late as May 20th, and early in spring, flocks of a hundred have been noted.

22. *Monitilta varia*; Black and white Creeper. Common in the deeper woods. Breeds.

23. *Helminthophaga chrysoptera*; Golden-winged Warbler. Regularly distributed and rather common. Breeds. Marked very rare by McIlwraith.

24. *Helminthophaga ruficapilla*; Nashville Warbler. Breeds commonly in swamps mostly evergreen, where there is thick growth of moss on the ground, among which the nest is placed.

25. *Helminthophaga peregrina*; Tennessee Warbler. Common at times during spring migration.

26. *Parula Americana*; Blue yellow-backed Warbler. Rather common. Breeds.

27. *Perisoreglossa tigrina*; Cape May Warbler. Only one taken; Mitchell's Bay, May 16th 1882.

28. *Dendroica æstiva*; Yellow Warbler. Breeds abundantly.

29. *Dendroica cærulescens*; Black-throated blue Warbler. Not uncommon during migrations. May breed as a male in full dress was taken June 22nd, 1882.

30. *Dendroica coronata*; Yellow-rump Warbler. Common in spring migrations, more abundant in fall.

31. *Dendroica maculosa*; Black and yellow Warbler. Rare migrant. May breed as a male was taken June 8th, 1882. More common north and east of these counties.

32. *Dendroica cærulea*; Blue Warbler. Common. Breeds. Generally stays high in the trees.

33. *Dendroica Pennsylvanica*; Chestnut-sided Warbler. Common. Breeds.

34. *Dendroica castanea*; Bay-breasted Warbler. Very rare during the migrations. Four specimens only taken.

35. *Dendroica striata*; Black-poll Warbler. Common some seasons during migrations; rare at others.

36. *Dendroica Blackburniæ*; Blackburnian Warbler. Somewhat common. Breeds. Frequents the high trees in swampy districts. Often feeds on the ground at Mitchell's Bay.

37. *Dendroica virens*; Black-throated Green

Warbler. Rather common during migrations and may breed as a male in full song was shot June 12th, 1882.

38. *Dendroica pinus*; Pine-creeping Warbler. Very rare. Two specimens taken.

39. *Dendroica palmeri hypochrysea*; Yellow Red-poll Warbler. Rather rare during migrations; several specimens taken.

40. *Siurus auricapillus*; Golden-crowned Thrush. Common. Breeds.

41. *Siurus naevius*; Water Thrush. Less common than the last but breeds regularly.

42. *Geothlypis Philadelphia*; Mourning Warbler. Not uncommon in low timbered bush and swampy thickets where it breeds. Marked very rare by McIlwraith.*

43. *Geothlypis trichas*; Maryland Yellowthroat. Common. Breeds.

44. *Myiodioctes mitratus*; Hooded Warbler. Very rare. Only one specimen taken.

45. *Myiodioctes Canadensis*; Canada Flycatcher. Rather common. Breeds regularly.

46. *Setophaga ruticilla*; Redstart. Common. This species and *D. aestiva* are our most common Warblers; this in the wilder and more wooded portions, while the other comes into the towns and inhabits scrub growth in the country.

47. *Vireosylva olivacea*; Red-eyed Vireo. Very common. This species and *V. gilva* are our most common Vireos.

48. *Vireosylva gilva*; Warbling Vireo. Very common. Breeds.

49. *Lanivireo flavifrons*; Yellow-throated Vireo. Common. Breeds.

50. *Lanivireo solitarius*; Blue-headed Vireo. Very rare; only one taken September 15th, 1877.

51. *Lanius borealis*; Great Northern Shrike. Rather common in spring and fall. Remains in mild winters but very few breed.

52. *Lanius ludovicianus excubitorides*; White-rumped Shrike. Rather common. Breeds.

53. *Ampelis garrulus*; Bohemian Waxwing. Appears in winter; sometimes in large flocks.

54. *Ampelis cedrorum*; Cherry Bird. Common. Breeds. Remains through mild winters.

55. *Progne subis*; Purple Martin. Common in towns, seldom seen in the country.

56. *Petrochelidon lunifrons*; Eave Swallow. Breeds abundantly.

57. *Hirundo erythrogastra*; Barn Swallow. Even more abundant than the last.

58. *Tachycineta bicolor*; White-bellied Swallow. Breeds commonly both in town and country.

59. *Cotyle riparia*; Bank Swallow. Breeds abundantly.

60. *Stelgidopteryx serripennis*; Rough-winged Swallow. Breeds in the same localities as the last, but is much less common and generally alone or in small communities by itself. Not given by McIlwraith; probably overlooked.

61. *Pyrranga rubra*; Scarlet Tanager. Common. Breeds. Frequenting mostly pine and other deep woods. Near the shores of Lake St. Clair, it feeds much on the ground.

62. *Hesperiphona vespertina*; Evening Grosbeak. At Winnipeg, Man., Prof. Macoun was shown specimens of this bird shot near London. McIlwraith gives several shot at Woodstock in 1863.

63. *Pinicola enucleator*; Pine Grosbeak. Occurs quite regularly in winter.

64. *Carpodacus purpureus*; Purple Finch. Common in fall, winter and spring. Breeds sparingly.

65. *Loxia curvirostra Americana*; Red Crossbill. Occasionally common in winter, One shot July 5th, 1882.

66. *Loxia leucoptera*; White-winged Crossbill. Occurs in winter but neither so abundantly nor as often as the preceding.

67. *Ægiothus linaria*; Redpoll. Common in winter, arriving in October and leaving in April. A nest of this species with two added eggs was found May 29th, 1879, and identified by comparison with European eggs.

68. *Astragalinus tristis*; Yellow Bird. Very common, remaining with us in mild winters. Breeds in the third week in July.

69. *Chrysomitris pinus*; Pine Finch. Rather common, arriving in October and leaving in April.

70. *Plectrophanes nivalis*; Snowbird. Common in large flocks in winter; in spring they sometimes stay till late in April and are then in song.

71. *Centropus lapponicus*; Lapland Longspur. First found this spring (1882), at Mitchell's Bay, Kent County, in flocks of from 25 to 200. According to the inhabitants these birds breed there but none were observed after May 18th.

72. *Passerculus Sandwichensis savanna*; Savannah Sparrow. Regular but not abundant breeder.

73. *Poocetes gramineus*; Grass Finch. Very common. Breeds.

74. *Coturniculus passerinus*; Yellow-winged Sparrow. Very rare. One specimen taken.

75. *Chondestes grammacus*; Lark Finch. Breeds but is rare. Has been seen common along the roadsides in the southern and western counties.

76. *Zonotrichia leucophrys*; White-crowned Sparrow. Common for a few days in spring, not yet observed in full.

77. *Zonotrichia albicollis*; White-throated Spar-

* Mr. McIlwraith, of Hamilton, O., published his list of Birds in the "Proceedings of the Essex Institute, Salem, Mass., 1866."

row. Common during migrations. May breed as one was heard June 22nd, 1882.

78. *Spizella montana*; Tree Sparrow. Common during migrations. Remains in mild winters.

79. *Spizella domestica*; Chipping Sparrow. Abundant everywhere.

80. *Spizella pusilla*; Field Sparrow. Rather local in its distribution, but common in its favorite localities. Breeds.

81. *Junco hgemalis*; Black Snowbird. Breeds Breeds, but not commonly. Common in migrations and in mild winters a few remain.

82. *Passer domesticus*; English Sparrow This little pest was introduced in London, Ont., about 1876, and is now abundant all through the city, and is found throughout the country for some distance; while almost all the towns and villages of Western Ontario have their quota.

83. *Melospiza fasciata*; Song Sparrow. Breeds abundantly and in mild winters a few remain.

84. *Melospiza palustris*; Swamp Sparrow. Moderately common in swamps consisting of low trees and bushes. At the St. Clair Flats it is abundant.

85. *Cardinalus Virginianus*; Cardinal Grosbeak. Two taken at Chatham, May, 1849. (E. W. Sandys).

86. *Passerella iliaca*; Fox-colored Sparrow. Rare during migrations. Four or five specimens taken.

87. *Pipilo erythrophthalmus*; Chewink. Common. Breeds.

88. *Zamelodia ludoviciana*; Rose-breasted Grosbeak. Rather common. Breeds.

89. *Passerina cyanea*; Indigo Bird. Common. Breeds.

90. *Dolichonyx oryzivorus*; Bobolink. Breeds abundantly but always makes a well concealed nest that is rather difficult to find.

91. *Molothrus ater*; Cowbird. Very common. Have found eggs in nests of Plover, Tawny Thrush, Bobolink, Meadow Lark, Yellow Warbler, Chestnut-sided Warbler, Golden-crowned Thrush, Golden-winged Warbler, Cherry Bird, Black Snowbird, Chipping Sparrow, Field Sparrow, Chewink, Song Sparrow, Red-eyed Vireo, Warbling Vireo, Indigo Bird.

92. *Agelaius phoeniceus*; Red-wing. Breeds abundantly in marshy places and near bodies of water; the majority of nests found being in bulrushes but often in bushes and once 8 feet from the ground in a thorn.

93. *Sturnella magna*; Meadow Lark. Common. Breeds. In fall collects in flocks and remains till about October 26.

94. *Icterus spurius*; Orchard Oriole. McIlwraith says, "I am only aware of one specimen being found in Canada." At present this is a common bird in Kent and Essex and is becoming

more so in Middlesex, having been observed a number of times this year.

95. *Icterus galbula*; Baltimore Oriole. Common. Breeds.

96. *Scolecophagus ferrugineus*; Rusty Blackbird. Rather common in the migrations.

97. *Quiscalus purpureus*; Crow Blackbird. Common. Breeds. Often in communities in an old orchard.

98. *Corvus corax carnivorus*; Raven. Occurs regularly at St. Clair Flats but is rare inland, except in the most unsettled districts.

99. *Corvus frugivorus*; Crow. Common. Breeds. Last year a flock of about five hundred was observed in June, generally much later.

100. *Cyanocitta cristata*; Blue Jay. Common. Resident throughout the year.

(Canada Jay not observed.)

101. *Eremophila alpestris*; Shore Lark. Very common in migrations, less so in summer when quite a number breed, and a still smaller number remain through the winter in small companies. Raises two or three broods. Young birds have been seen following the parents April 25th.

102. *Tyrannus Carolinensis*; Kingbird. Common. Breeds.

103. *Myarchus crinitus*; Great-crested Flycatcher. Less common than the last. Has a great fondness for snake skins in the nest.

104. *Sayornis fusca*; Pewee. Common. Breeds. Its favorite resort for nesting is on beams of old bridges; one nest, with repairs, being used for years. Two broods are generally raised.

105. *Contopus borealis*; Olive-sided Fly-catcher. Not uncommon in the northern counties; not observed in the southern.

106. *Contopus virens*; Wood Pewee. Common. Breeds.

107. *Empidonax Acadicus*; Acadian Fly-catcher. Very rare, only one specimen taken; Hyde Park.

108. *Empidonax pusillus* Trailli; Traill's Flycatcher. Rare and usually wary.

109. *Empidonax minimus*; Least Fly-catcher. Generally common; quite scarce this year. Equally distributed through town and country.

110. *Trochilus colubris*; Ruby-throat. Common. Arrives early in May.

111. *Chaetura pelagica*; Chimney Swallow. Common. Breeds. In the fourth week in May, 1862 thousands of these birds were observed circling around some chimneys on the Parliament buildings at Ottawa. In the woods they nest in hollow stumps.

112. *Caprimulgus vociferus*; Whip-poor-will. Rather common but local in distribution, preferring rough pieces of country.

113. *Chordeiles popetue*; Night hawk. Very common. Breeds.

114. *Picus villosus*; Hairy Woodpecker. Breeds

regularly but is not abundant. Remains all winter.

115. *Picus pubescens*; Downy Woodpecker. A common resident.

116. *Picoides Arcticus*; Black-backed three-toed Woodpecker. Very rare. One taken in London in the fall of 1875.

117. *Picoides hirsutus*; Banded Three-toed Woodpecker. One shot about 30 miles north of London in winter of 1881-82.

118. *Sphyrapicus varius*; Yellow-bellied Woodpecker. Common in migrations and quite a number remain to breed.

119. *Hylotomus pileatus*; Pileated Woodpecker. Very rare. Has retired to less thickly settled districts.

120. *Centurus Carolinus*; Red-bellied Woodpecker. Rather common in migrations and a few breed. Mellwraith says, "On the third of May (1865) I shot three specimens of this bird near Chatham. Farther east it is quite rare."

121. *Melanerpes erythrocephalus*; Red-headed Woodpecker. The most abundant of this family and no favorite with the farmer, as it makes large and increasing depredations on the fruit crop. In mild winters a few remain.

122. *Colaptes auratus*; Highholder. Only less abundant than the last. Migrates earlier and returns later.

123. *Ceryle alcyon*; Kingfisher. Common along the rivers and streams. Breeds in holes five to eight feet long and makes no nest.

124. *Coccyzus Americanus*; Yellow-billed Cuckoo. Rather common. Mellwraith says, "Have only seen one specimen of this bird in Canada."

125. *Coccyzus erythrophthalmus*; Black-billed Cuckoo. Common. Breeds. There is a marked scarcity of this species this year. Have often blown six eggs from a nest.

(To be continued.)

COLEOPTERA FOUND IN THE PROVINCE OF QUEBEC.

BY WILLIAM COUPER.

MONOCREPIDIUS auritus, *Herbst.*

AGRIOTES 1 mancus, *Say.*

2 fuscus, *LeConte.*

3 limosus, "

4 pubescens, *Mels.*

5 stabilis, *Lec.*

DOLOPIUS pauper, *Lec.*

BETARMON bigeminatus, *Rand.*

MELANOTUS 1 fissilis, *Say.*

2 communis, *Gyll.*

3 decumanus, *Er.*

MELANOTUS 4 sagittarius, *Lec.*

5 depressus, *Mels.*

6 castenipes, *Payk.*

7 Leonardi, *Lec.*

LIMONIUS 1 griseus, *Beauv.*

2 phebejus, *Lec.*

3 ectypus, *Say.*

4 basilaris, *Say.*

5 agonus, *Say.*

CAMPYLUS denticornis, *Kirby.*

ATHOUS 1 affinis, *Couper.*

2 rufifrons, *Lec.*

3 Brightwelli, *Say.*

4 bipunctatus, *Prov.*

5 acanthus, *Say.*

CESTODES tenuicollis, *Rand.*

CORYMBITES 1 trinudulatus, *Rand.*

2 hieroglyphicus, *Say.*

3 splendens, *Ziegl.*

4 æripennis, *Kirby.*

5 pulcher, *Lec.*

6 aeranus, *Rand.*

7 cylindricornis, *Herbst.*

8 vernalis, *Hentz.*

9 Kendallii, *Germ.*

10 tarsalis, *Mels.*

11 falsificus, *Lec.*

12 athoides, "

13 pyrrhos, "

14 appressifrons, *Rand.*

15 tessellatus, *Linn.*

16 vulneratus, *Lec.*

17 spinosus, "

18 sulscollis, *Say.*

19 medianus, *Germ.*

ASAPHES 1 memnonius, *Herbst.*

2 decoloratus, *Say.*

3 melanophthalmus, *Mels.*

4 aereus, *Mels.*

5 brevicollis, *Lec.*

CEBRIO bicolor, *Fabr.*

PITYOBUIS 1 Billingsii, *Bland.*

2 anguinus, *Lec.*

EANUS maculipennis, "

SERICOSOMUS 1 fuscicornis, *Lec.*

2 incongruus, "

OXYGONUS obesus, *Lec.*

DICTYOPTERA perfaceta, *Say.*

EURYPOGON niger, *Mels.*

CYPHON 1 pallipes, *Lec.*

2 fusciceps, "

3 nebulosus, "

4 ruficollis, *Say.*

SCIIRTES tibialis.

CALOPTERON 1 reticulatum, *Fabr.*

2 apicalis, *Lec.*

- CAENIA 1 dimidiata, *Fabr.*
2 basilaris, *Newm.*
- EROS 1 coccinatus, *Say.*
2 caniculatus, *Say.*
3 modestus, "
- LUCIDOTA atra, *Fabr.*
- PHOTINUS 1 corruscus, *Linn.*
2 lacustris, *Lec.*
3 nigricans, *Say.*
4 angulatus, "
5 ardens, *Lec.*
6 consanguineus, *Lec.*
7 pyralis, *Linn.*
8 scintillans, *Say.*
- PHOTURIS Pennsylvanica, *DeGeer.*
- CHAULIOGNATHUS 1 Pennsylvanicus, *DeGeer.*
2 marginatus, *Fabr.*
- PODABRUS 1 flavicollis, *Lec.*
2 diadema, *Fabr.*
3 porticollis, *Lec.*
4 simplex, *Couper.*
5 punctulatus, *Lec.*
6 laevicollis, *Kirby.*
- TELEPHORUS 1 rotundicollis, *Say.*
2 Carolinus, *Fabr.*
3 tuberculatus, *Lec.*
4 excavatus, "
5 biliniatus, *Say.*
6 rectus, *Mels.*
7 fraxini, *Say.*
8 marginellus, *Lec.*
9 armiger, *Couper.*
10 scitulus, *Say.*
- SILIS 1 luteicollis, *Germ.*
2 percomis, *Say.*
- COLLOPS 1 quadrimaculatus, *Fabr.*
2 vittatus, *Say.*
3 tricolor, "
- CYMATODERA bicolor "
- CLERUS Nuttalli, *Kirby.*
- THANASIMUS 1 nigripes, *Say.*
2 dubius, *Fabr.*
3 nubilus, *Klug.*
4 thoracicus, *Oliv.*
5 sanguineus, *Say.*
- HYDROCERA 1 humeralis, "
2 curtipennis, *Newm.*
- CORYNETES violaceus, *Linn.*
- CUPES capitata, *Fabr.*
- PTINUS 1 fur, *Linn.*
2 brunneus, *Dufsch.*
- ANOBIUM notatum, *Say.*
- PTILINUS 1 ruficornis, *Say.*
2 thoracicus, *Rand.*
- DINODERUS substriatus, *Payk.*
- SPHINDUS Americanus, *Lec.*
- EUCRADA humeralis, *Mels.*
- TRYPODITYS sericeus, *Say.*
- SITRODREPA panicea, *Linn.*
- HADROBREGMUS 1 foveatus, *Kirby.*
2 carinatus, *Say.*
3 errans, *Mels.*
- TRILOBIMUM ferruginosum, *Fabr.*
- CRYPTICUS absoletus, *Say.*
- HYPOPHLEUS parallelus, *Mels.*
- PHELLOPSIS obcordata, *Lec.*
- BLAPSTINUS 1 metallicus, *Fabr.*
2 interruptus, *Say.*
- XYLOPINUS saperdioides, *Oliv.*
- UPIS ceramboides, *Linn.*
- NYCTOBATES Pennsylvanica, *DeGeer.*
- IPTHIMUS opacus, *Lec.*
- TENEBRIO 1 obscurus, *Fabr.*
2 molitor, *Linn.*
3 castaneus, *Knock.*
4 tenebrionides, *Beauv.*
- PARATENETUS punctatus, *Sol.*
- ULOMA 1 impressa, *Mels.*
2 punctulata, *Lec.*
- BOLITOTHERUS cornutus, *Fabr.*
- DIAPERIS hydni, *Fabr.*
- HOPLOCEPHA bicornis, *Oliv.*
- PLATYDEMA 1 ruficornis, *Sturm.*
2 ellipticum, *Fabr.*
3 Americanum, *Lap.*
4 laevipes, *Hald.*
- SCAPHIDEMA aeneolum, *Lec.*
- HYMENORUS niger, *Mels.*
- ISOMIRA quadristriata, *Couper.*
- CISTELA sericea, *Say.*
- MYCETOCHARUS 1 bicolor, *Couper.*
2 fraterna, *Say.*
3 foveata, *Lec.*
- ALLECULA punctulata, *Mels.*
- CAPNOCHROA fuliginosa, *Lec.*
- ANDROCHIRUS luteipes, *Lec.*
- ARTHROMACRA aenea, *Say.*
- TETRATOMA truncorum, *Lec.*
- PENTHE 1 obliquata, *Fabr.*
2 pimelia "
- SYNCHROA punctata, *Newm.*
- EUTROPHUS 1 tomentosus, *Say.*
2 bicolor, *Fabr.*
- ORCHESIA gracilis, *Mels.*
- SERROPALPUS striatus, *Hellen.*
- HYPULUS lituratus, *Lec.*
- XYLITA levigata, *Hellen.*
- ZILORA unda, *Prov.*
- MEANDRYA striata, *Say.*
- EMMESA 1 labiata "
2 connectus, *Newm.*

(Continued from page 180, No. 10.)

THE CANADIAN SPORTSMAN AND NATURALIST.

No. 12.

MONTREAL, DECEMBER, 1882.

VOL. II.

WILLIAM COUPER, Editor.

EDITORIAL NOTES.

A beautiful young specimen of the rare Least Auk (*Ciceronia pusilla*), was sent to Montreal to be stuffed. It was mailed a short time ago from Newcastle, N. B., by R. Mackenzie, Esq.

A fine young specimen of the Solan Goose or Gannet (*Sula bassana*) was lately shot by Mr. A. W. Barnes of this city, in the St. Lawrence, near Contrecoeur.

Last August, Baron de la Grange, of Paris, accompanied by Mr. N. A. Comeau of Godbout P.Q., went on a hunting tour through Wyoming and Montana. They had good sport, having killed two grizzlies; thirty-eight buffalo; fifteen wapiti; seventeen black-tailed deer; eleven antelope; five mountain sheep and some smaller quadrupeds. The Baron has several wapiti and other deer heads and skins as trophies.

During this season, Mr. L. A. Boyer, of Montreal, shot young Eider duck (*Somateria mollissima*), near Summerstown, Ont. It is unusual to find these birds so far from the sea. He has had a pair preserved and stuffed. Those birds may possibly be the young of *S. Dresseri*, Sharpe, Ann. Mag. N. H., 1871, figs. 1 and 2. The true Eider has only lately been detected in America, it being the form found by Mr. Kumlien breeding abundantly on the west side of Cumberland Gulf.

AN ENGLISH WOODCOCK SHOT AT CHAMBLY, QUEBEC.

A specimen of the English Woodcock (*Scolopax rusticula*), was shot on the 11th ultimo, by a French Canadian at Chambly, P. Q. Colour, size and weight of the bird confused the man, who carried the stranger to Mr. Brock Willett, who knew what it was, but he became incredulous—as we did when it was brought to us in the flesh—that a fat twelve ounce European Woodcock could be obtained in Canada, in November; but its freshness settled the doubt, and the bird is now stuffed.

We believe this is the first specimen shot so far inland in Canada. The other record of a specimen occurring far north on this continent is one taken in Newfoundland in 1866. Dr. Coues in "The American Naturalist," X., No. 6, June, 1876, p. 372, records one specimen as having been shot in Virginia, U. S.

DUCK FEEDING GROUNDS.

"A deputation from the Fish and Game Protection Club, consisting of Messrs. L. A. Boyer, Rintoul, Selkirk Cross, and W. Parker, waited on the Provincial Premier while in Montreal last month, to request a grant of \$250 for the sowing of wild rice in the different duck feeding grounds throughout the province. The deputation was very politely received and their request granted by the Hon. Premier. The grant is to be added to the sum of \$100, which the Club guarantees to raise from amongst its members. It may be mentioned that this can hardly be called a tax upon the province, as the law passed last session compelling strangers to take out sporting licenses has already resulted in the netting of a considerable sum to the province, and which will annually increase, as the sporting grounds are protected and improved."

NOTE.—If wild rice turns out productive in this latitude, several of our lakes and ponds will doubtless have an annual tenfold increase of wildfowl, and the sportsmen of the Province of Quebec will not hereafter complain of having to leave their old hunting grounds in search of game elsewhere. This aquatic plant was sent broadcast into the Canadian waters of Lake Champlain about twelve months ago, and we have been informed that it was coming up last spring. The Fish and Game Club should select good natural localities for the propagation and extension of the seed.

THE WINCHESTER CLUB.

A club has just been organized for the purchase of the hunting grounds in the county of St. Maurice. Besides acquiring some of the bush land about St. Elie, on which a sports-

man's lodge will be built, the club proposes to secure fishing and shooting rights over other land in the county, and will engage in the propagation of fish and preservation of game. The proposed site of operations has been one of the richest hunting and fishing grounds in the province, and with two years protection, the club hope to be able to re-stock the rivers and forests of the county. Salmon will be introduced into some of the rivers. Messrs. W. Skillings, of Bethel, J. P. Spaulding, of Boston, Romeo H. Stephens, of St. Lambert, Sheldon Stephens, of Montreal, and W. H. Parker, St. Elie, have been elected a provisional board of directors. The club will seek incorporation at the next session of the Provincial Legislature, under the name of the Winchester Club, with a capital of \$6,750 divided into thirty shares.

NOTE.—There are good names connected with the above Club, and we will use our influence to make it a success.

ANSWER TO CORRESPONDENT.

John H. Morden, Hyde Park, Ont.—Write to S. E. Cassino, 299 Washington St., Boston, U.S. He is the publisher of the "Naturalist's Directory," in which you will find the addresses of the most prominent Taxidermists on this continent. You must send two dollars for the work.

Correspondence.

DEAR SIR,—On page 170 of your Journal you say in answer to a correspondent, that "three other species, viz:—the Scarlet or Swamp Maple (*Acer saccharinum*); the Sugar or Rock Maple (*A. nigrum*) are used "as ornamental trees in the neighbourhood of "Montreal." Permit me to point out that you only mention two species in addition to *A. dasycarpum*, and that the Scarlet or Swamp Maple is *A. saccharinum*, and that according to Gray, *A. nigrum* is only a variety of *A. saccharinum*.

Yours truly,
H. H. LYMAN.

NOTE.—Our correspondent is correct regarding the above maples. A mistake occurred in the specific names; the Soft or Swamp Maple should be *rubrum*, and the Sugar Maple *saccharinum*; the *nigrum* referred to in our article is a variety of the latter.

MY BARK CANOE.

Fresh from the dusky Indian's hand,
I launched thee on the pebbly strand
Ten years ago; tight, trim and new,
My buoyant, light-built bark canoe,
No white man's hand could fashion thee,
Thy perfect lines curved gracefully;
"A thing of beauty," through and through,
Wert thou my matchless bark canoe!

Oft o'er the Ottawa's rippling swell
I journey'd in thee safe and well;
Steady wert thou as any rock,
Resisting the explosive shock
Of "*Faugh-a-Ballagh's*" roaring ring,
At swift, black duck upon the wing—
From thee the "chilled" went always true,
My staunch, my beautiful canoe!

Upon thy ribs red stains I see,
Each is a record plain to me
Of scenes gone by—each crimson spot,
A witness of some long range shot,
There lay the quarries side by side,
Arrested in their plumaged pride;
Delightful to a sportsman's view,
My beautiful old bark canoe!

Some killed at eighty yards and more,
Have stained thy sheeting with their gore;
The mallard in his headlong flight
Hurled quivering from his airy height,
The gorgeous wood-duck and the teal—
The strong merganser's wings of steel;
The golden-eye, whose whistling wing
Made Nova Zembla's inlets ring,
Each shattered fell, pierced through and through,
To freight my beautiful canoe.

The stately pintail there has lain,
The black duck and the red-head slain—
The bluebill and the buffle-head,
There stretched beside each other dead—
The graceful white-crested merganser—
The wild goose—Canada's great *anser*—
The osprey from his lightning sweep
Has flutted to eternal sleep,
The huge-winged heron often too
Has graced my beautiful canoe.

There lay the widgeon in his pride,
The mottled spirit duck beside,
The ruffed grouse, yellow leg and rail,
The cackling coot with restless tail,
The snipe, dabchick and golden plover,
The woodcock, monarch of the cover,
The night heron with drooping crest,
The bittern in loose garment drest,
Each has a place in past review,
In thee my beautiful canoe.

And last, not least, the antlered deer,
Has found his final pillow here,
Down from the "mountain's crown" he came,
The proud, majestic king of game!
"Swift in his wake" old Bugle's yell
Rose on the blast with echoing swell:
Like otter through the flood he dashed,
The paddle swept, the rifle flashed,
And on the crashing bullet flew,
He's lying in my bark canoe.

I look on thee through memory's haze,
And see once more the camp fire's blaze,
My loved companions seated round
That almost consecrated ground—
I hear their merry laugh again,

Mirth's careless, joyous, wild refrain ;
The joke, the song, the hunting story,
Return in all their vivid glory—
Green spots of bliss, alas ! how few,
My beautiful old bark canoe !

I look on thee and think upon
The happy days forever gone,
I miss, how sadly, from my side
My spirit's twin, my manhood's pride,
The ready hand, the loving heart,
The soul of my own soul a part,
The gentle voice, the smile which gave
Me courage to be true and brave—
All these were mine when thou wert new,
My beautiful old bark canoe !

WILLIAM PITTMANN LETT.

Ottawa, Nov. 19th, 1882.

AN EXPLANATION BY MR. WHITCHER.

Rideau Bank, Ottawa.

DEAR MR. COUPER,

Attention is drawn to certain passages in an article in *The Canadian Sportsman and Naturalist*, viz :—

"When Mr. Wilmot exhibited his fishes at Ottawa, the Editor of this Journal competed with a collection of stuffed food-fishes from the Province of Quebec; many of the latter species were different from those exhibited by the former gentleman. The Quebec fish collection was offered to the Fisheries Department, at a reasonable price; the offer being made through Mr. Whitcher, who knew the lot was a bargain, and by his request, they were packed and left in Ottawa, to await a reply from the Chief of the Department. Some days afterwards an answer was received that the Department had no money to purchase stuffed fishes, and the collection was brought back to Montreal, where it was immediately purchased by Dr. Sterry Hunt and presented to McGill College Museum. Mr. Wilmot endeavoured to induce Mr. Whitcher to purchase the collection, and probably they now regret not having secured it.

The latter reference to myself is entirely incorrect. Your own recollection of that occasion should have suggested the improbability of this assertion. Please recall the facts: You were a professional exhibitor of stuffed fishes of your own handiwork at the Dominion Exhibition. Mr. Wilmot was President of the Association and exhibited stuffed fishes belonging to the Government, entered in his own name. I objected, through Dr. Sterry Hunt, to these being put in competition for personal prizes or medals, much to Mr. Wilmot's displeasure; and having failed to protect your industry in this way, I promised to do whatever could be done towards securing your valuable exhibit for this Department, and asked you to delay shipment. There are, as correctly stated in this article, no funds provided for such purpose; but as Mr. Wilmot's specimens had been procured out of fish-breeding funds, and were thus placed on exhibition for prizes or medals to himself, my idea was

to acquire your's in the same way through him, and a correspondence was had accordingly. He did not consider your's worth acquiring and so reported. It was therefore inconvenient for the minister to authorize the purchase, and my proposal dropped. I understood that the injustice towards you as a professional was somewhat softened by awarding you a second prize; but the chief prizes and gold or silver medals went the way they were probably intended from their origin.

By referring to a recent number of the *Toronto Globe* you will find it stated, in course of an interview with Mr. Wilmot, that he says "no Taxidermist can be found in Canada whose work would appear in a favorable light," "or whose specimens (presumably of fish) are artistic enough" to be attractive. This accords with his opinion of your's. Unqualified depreciation will doubtless be a surprise if not an amusement to many other Taxidermal artists besides yourself, who are obliged to labor in the business without such public encouragement or private patronage, as in older countries serve to enhance the art and improve the productions of Taxidermy.

I quite agree with the *Sportsman and Naturalist* that facilities should be afforded to form a museum of aquatic animals; and I have striven during several years past to impress its importance on official minds. Time passes rapidly and with it many of the opportunities to make a choice and finished collection are also passing away. The great representative specimens (particularly of our ichthyic fauna) are fast disappearing. We find the want of such a storehouse, as should long since have been formed, in connection with the fisheries service whenever the country requires to participate in public displays. Notably at the present juncture.

The article in question adds, referring to the International Fisheries Exhibition:—"We know that Mr. Wilmot, of Newcastle, Ont., has done his share to make a successful show, but some one in the Department is to blame for procrastination and want of energy." If the reflection is meant for my benefit—as most of the editorial reflects on me personally—your information on this point also is incorrect, as I have had nothing whatever to do with the matter, beyond making a timely statement of what was required to be done in order to do justice to Canada on so important and trying an occasion, offering also some practical suggestions as far back as last winter. Mr.

Wilmot claims to be charged with the duty; and if, as he complains through you and the *Globe*, there is indifference and neglect chargeable against the Canadian Government, and dilatoriness by the Imperial Commission, it must be obvious that the proper way to settle it is with the authority under which he says that he is acting, and certainly not through vague insinuations aimed at "Some one in the Department" on whom the blame of his own anticipated failure may if necessary be conveniently shifted.

This communication has been withheld hoping that Mr. Wilmot would correct the mis-statements. Reluctantly and in self defence I now ask you to please do so on my behalf.

Before parting let me add that I fully endorse what you have said of the value to his country, of such a "live" Commissioner of Fisheries as Prof. Baird, and as heartily do I join with him in wishing that we had his like in Canada, to say nothing of his zealous staff of scientists and other practical workers, all supported by ample means and adequate authority. The United States Government thoroughly appreciates the federal fisheries service; and besides maintaining it on a liberal footing, has always treated the able and earnest officer at its head in a spirit of justice and generosity, worthy of the great national interest which he seeks to promote, and the vast productive industry which he labors to develop.

Your obedient Servant,

W. F. WHITCHER.

LIST OF THE BIRDS OF WESTERN ONTARIO.

CONTINUED FROM PAGE 187.

126. *Asio Americanus*; Long-eared Owl. Uncommon. Occasionally several may be seen hunting a field in winter like Harriers.
127. *Asio accipitrinus*; Short-eared Owl. Rare. We have only taken four.
128. *Strix nebulosa*; Barred Owl. Common; breeds. Formerly abundant.
129. *Urolophus cinereus*; Cinereous Owl. Two in possession of S. Herring, Toronto, shot near London. Very rare in winter.
130. *Nyctale Acadica*; Acadian Owl. Rather rare. Not known to breed.
131. *Scops asio*; Mottled Owl. Our most common Owl. Breeds.
132. *Bubo Virginianus*; Great Horned Owl. Common. Breeds very early.
133. *Nyctale Scandiac*; Snowy Owl. Occasionally common in winter. More regular along

the lake-shore, especially Lake St. Clair.

134. *Eurnia funerea*; Hawk Owl. Very rare. One bought in the flesh in London, 187—. [E. W. Sandys.]

135. *Falco peregrinus navius*; Duck Hawk. Very rare inland. One taken near London, 187—. (Nine) Frequently seen in fall at St. Clair Flats.

136. *Falco columbarius*; Pigeon Hawk. Rare; three or four taken.

137. *Tinnunculus sparverius*; Sparrow Hawk. Our most common Hawk. Breeds.

138. *Pandion haliaetus Carolinensis*; Fish Hawk. Rare inland. More common along the lake-shore where it breeds.

139. *Elanoides forficatus*; Swallow-tailed Kite. Some years ago a pair of these birds stayed all summer about eight miles North-west of London.

140. *Circus Hudsonius*; Marsh Hawk. Rare inland. Very common along the large marshes, where it breeds.

141. *Accipiter Cooperi*; Cooper's Hawk. Rather common; breeds.

142. *Accipiter fuscus*; Sharp-shinned Hawk. Common in the fall, but only a few breed. Late in September, 1882, large numbers of these hawks were seen on Point Pelee, as many as fifty passing the house in a day. It seems they are equally abundant every year.

143. *Astur atricapillus*; Goshawk. Occurs frequently in winter and regularly at the St. Clair Flats.

144. *Buteo borealis*; Red-tailed Hawk. Common; breeds.

145. *Buteo lineatus*; Red-shouldered Hawk. The most common of our large hawks; breeds.

146. *Buteo Pennsylvanicus*; Broad-winged Hawk. Sometimes common in flocks during migrations. At other times single individuals are rather rare.

147. *Archibuteo lagopus sancti-johannis*; Rough-legged Hawk; Black Hawk. Common in fall at the St. Clair Flats.

148. *Aquila chrysaetus Canadensis*; Golden Eagle. Very rare. Mr. Sandys reports two—one of which was taken in the winter of '74-5 benumbed by cold, and is still alive in captivity.

149. *Haliaeetus leucocephalus*; Bald Eagle. Rather rare. A pair breeds regularly on a lake-side farm in Kent, and several pairs on Point Pelee. Seldom seen in the older districts. The pair on the Kent farm live chiefly on fish and muskrats, taking the former from the water themselves, winter and summer.

150. *Cathartes aura*; Turkey Buzzard. Reported from various points in the St. Clair marshes.

151. *Ectopistes migratoria*; Pigeon. Formerly abundant. Now rare except in the less settled districts.

152. *Zenaidura Carolinensis*; Dove. Regularly distributed and rather common; breeds. A specimen taken January 6, 1877.

153. *Meleagris gallopavo Americana*; Wild Turkey. Formerly common, but now very rare. A nest was found in Middlesex in 1878.

154. *Canace Canadensis*; Canada Grouse. One taken near Chatham. E. W. Sandys. 187-

155. *Bonasa umbellus*; Ruffed Grouse. Common; Breeds.

156. *Cupidonia cupido*; Prairie Hen. A few are resident at St. Clair Flats.

157. *Ortyx Virginianus*; Quail. Common; breeds.

158. *Ardea herodias*; Great Blue Heron. Common. Generally breeds in communities, but occasionally in single pairs.

159. *Herodias alba egretta*; Great White Egret. Regular but rare. near large bodies of water, sometimes even on rivers.

160. *Butorides virescens*; Green Heron. Rather rare. Occasionally quite common.

161. *Nyctiardea grisea nevia*; Night Heron. Occurs at the St. Clair Flats in small numbers where it probably breeds.

162. *Botaurus lentiginosus*; Bittern. Rare inland but common at the St. Clair and other marshes, where it breeds.

163. *Ardetta exilis*; Least Bittern. Occurs with the last but not quite so common, and more seldom inland.

264. *Streptilas interpres*; Turnstone. Rare during migrations.

165. *Squatarola helvetica*; Black-bellied Plover. Common migrant.

166. *Charadrius dominicus*; Golden Plover. Formerly occurred in immense flocks. Now regular but in limited numbers in fall inland and during both migrations at the lakes.

167. *Oxyechus vociferus*; Killdeer. Rather common; breeds.

168. *Ægialites semipalmatus*; Semipalmated Plover. Common at the lakes; uncommon inland.

159. *Ægialites melodus*; Piping Plover. Common at Point Pelee where it breeds; elsewhere, occurring only along the lake-shore and rare.

170. *Philohela minor*; Woodcock. Rather common; breeds.

171. *Gallinago media Wilsoni*; Snipe. Common in the migrations. Many breeds in the St. Clair marshes as a pair were shot 17-5-'82.

172. *Macrorhampus griseus*; Robin Snipe. Rare along the lakes.

173. *Actodromas maculata*; Pectoral Sandpiper. Occurs in flocks in the marshes in fall.

174. *Actodromas minutilla*; Least Sandpiper. Occurs rarely inland but is common on the lake-shore.

175. *Pelidna alpina Americana*; Dunlin. Common in migrations along the lakes.

176. *Ereunetes pusillus*; Semipalmated Sandpiper. Common migrant at the lake-shore but rare inland.

177. *Calidris arenaria*; Sanderling. Common migrant along the lakes.

178. *Limosa fedta*; Marbled Godwit. Rare migrant along the lakes.

179. *Totanus melanoleucus*; Greater Yellow-legs. Rare inland but more common in the large marshes.

180. *Totanus flavipes*; Little Yellow-legs. Occurs with the preceding.

181. *Rhyacophilus solitarius*; Solitary Sandpiper. In the summer of 1879, this bird bred very commonly along the streams in Middlesex but since then has been quite rare.

182. *Bartramia longicauda*; Bartram's Sandpiper. Very rare. Only one specimen taken.

183. *Tringoides macularius*; Spotted Sandpiper. Common everywhere along streams and marshy spots.

184. *Numenius longirostris*; Long-billed Curlew. Formerly occurred as far inland as Middlesex—probably never now. Rather common migrant in the large marshes.

185. *Phalaropus fulicarius*; Red Phalarope. Very rare. Dr. Garnier shot one out of a flock of six in the fall of 1880 at Mitchell's Bay.

186. *Lopipes hyperboreus*; Northern Phalarope. Rare. Three taken in Middlesex; one found dead at Mitchell's Bay in May 1882.

187. *Steganopus Wilsoni*; Wilson's Phalarope. Very rare. One taken May, 1882, at Mitchell's Bay.

188. *Recurvirostra Americana*; Avocet. Extremely rare. One taken in the spring of 1860, at Rondeau. [E. W. Sandys.]

189. *Rallus elegans*; King Rail. Common at St. Clair Flats where it breeds. McIlwraith gives Clapper Rail but not King Rail—probably a case of mistaken identity as it is improbable that the Clapper will occur.

190. *Rallus Virginianus*; Virginia Rail. Rare inland but common at all the large marshes, where it breeds.

191. *Porzana Carolina*; Carolina Rail. Uncommon inland but breeds abundantly in the large marshes.

192. *Porzana Noveboracensis*; Little Yellow Rail. Rare in the large marshes.

193. *Gallinula galeata*; Florida Gallinule. Breeds very abundantly in the large marshes.

194. *Fulica Americana*; Coot. Almost as abundant as the last, and is also taken in the rivers inland.

195. *Grus Canadensis*; Sand-hill Crane. Extremely rare in the large marshes.

196. *Olor Americanus*; Whistling Swan. Occurs regularly at St. Clair and other suitable places.

197. *Olor buccinator*; Trumpeter Swan. In Jour. Proc. Linn. Soc., 1865, Rev. W. Hincks (Toronto) says: "*O. buccinator* is our commonest species." It must, therefore, occur with the other at St. Clair Flats, although we have no record of it.

198. *Chen hyperboreus*; Snow Goose. Very rare. Two specimens taken (E. W. Sandys).

199. *Anser albifrons Gambeli*; White-fronted Goose. Rare Migrant.

200. *Bernicla Canadensis*; Canada Goose. Common migrant.

201. *Bernicla brenta*; Brant. Rather rare migrant.

202. *Anas boscas*; Mallard. Uncommon inland but common migrant in the large marshes where a few breed.

203. *Anas obscura*; Black Duck. Common migrant. A few breed in the large marshes, also taken inland.

204. *Chaulelasmus streperus*; Gray Duck. Rather rare but occurs regularly at St. Clair.

205. *Dafila acuta*; Pintail. Common. Breeds at St. Clair.

206. *Mareca Americana*; Widgeon. Rather common. May breed.

207. *Spatula clypeata*; Shoveller. Rather rare at St. Clair Flats, and may breed.

208. *Querquedula discors*; Blue-winged Teal. Common. A few still breed at St. Clair.

209. *Nettion Carolinensis*; Green-winged Teal. Common migrant. Not known to breed.

210. *Aix sponsa*; Wood Duck. Regularly distributed and rather common. Breeds along the marshes and rivers.

211. *Fulix marila*; Scaup Duck. Very common migrant. A few breed at St. Clair. Also taken common inland.

212. *Fulix affinis*; Bluebill. Like the preceding. Also taken common inland.

213. *Fulix collaris*; Ring-billed Duck. Common in some migrations in the large marshes.

214. *Althya vallisneria*; Canvas-back. Rather rare at St. Clair Flats. Migrant.

215. *Althya Americana*; Redhead. Very common migrant, and some breed in the large marshes. Also taken inland.

216. *Clangula glaucium Americana*; Golden-eye. Rather common migrant. Also taken inland.

217. *Clangula albeola*; Bufflehead. Common migrant and a few breed at St. Clair Flats. Also taken inland quite common.

218. *Harelda glacialis*; Long-tailed Duck. Rather rare migrant at St. Clair. An immature

male was picked up in the snow January, 1881, near Hyde Park.

219. *Eidemia Americana*; Scoter. Rare migrant.

220. *Melanetta velutina*; Velvet Scoter. Very rare migrant.

221. *Erismatura rubida*; Ruddy Duck. Abundant migrant and a few breed in the marshes. Also taken inland, common.

222. *Mergus merganser Americanus*; Goosander. Common migrant both on rivers and lakes.

223. *Mergus serrator*; Red-breasted Merganser. Rare migrant.

224. *Lophodytes cucullatus*; Hooded Merganser. Common migrant both inland and at the lakes.

225. *Pelecanus erythrorhynchus*; White Pelican. One taken near Chatham 187—; also one near Ingersoll several years ago.

226. *Phalacrocorax carbo*; Cormorant. Occurs rarely along the lakes.

227. *Larus argentatus Smithsonianus*; Herring Gull. Common. Probably breeds.

228. *Larus Philadelphix*; Bonaparte's Gull. Common in spring in fall.

229. *Sterna Forsteri*; Forster's Tern. Common; breeds at St. Clair.

230. *Sterna fluvialtilus*; Common Tern. Breeds at St. Clair but in smaller numbers than the last.

231. *Hydrochelidon lariformis surinamensis*; Black Tern. Breeds very abundantly at St. Clair marshes.

232. *Podiceps Holbolli*; Red-necked Grebe. Very rare; one taken at Mitchell's Bay.

233. *Dytes auritus*; Horned Grebe. Breeds abundantly at St. Clair Flats.

234. *Podilymbus podiceps*; Carolina Grebe. Breeds abundantly at St. Clair Flats.

235. *Colymbus torquatus*; Loon. Common in the large marshes and at some points in the lakes. Breeds.

236. *Colymbus septentrionalis*; Red-throated Diver. Very rare. One shot on the Thames near London in spring 1881. Occasional at St. Clair Flats.

INTELLIGENCE AND HUMOUR IN A HORSE.

A friend and neighbor of mine, recently informed me, that a few years ago, his father possessed a colt which exhibited proofs of intelligence amounting to reason, and also to a certain degree of a sense of humour. The stables on his farm are ranged in a row under the barn, and the lower doors are fastened, as usual, with a long wooden bolt. The colt learned in some way how to draw back the bolts, and so to open the stable doors and let out all the other horses which stood loose in the stalls. He then

seemed thoroughly to enjoy the mischief he had done. In order to prevent this practice, which became troublesome, holes were bored in the doors behind the bolts, and wooden pins inserted, so that the bolts could not be drawn back without first taking out these pins. For some time this device baffled the colt, but before long he found out how to evade it, and used to pull out the pin with his teeth, draw the bolt and let the door fall open as before. He would then gallop off with the pin in his mouth and drop it where it could never be found again. After having thus opened the doors and let out the horses, his master would often try to catch him, but the stables communicated with one another at the back, and the colt used to dodge the old man in at one door and out at the other, as in pure fun or mischief, until some one of the younger and more active men, came with a stick and brought him to terms. The above acts indicate no low order of reason, and certainly look as if the colt enjoyed playing the pranks and witnessing the discomfiture of his master.

E. W. CLAYPOLE,

New Bloomfield, Perry Co., Pa. }
Nov., 26th 1882. }

CANADIAN OÖLOGY.

DEAR SIR,—I am much interested in the list of Western Canadian Birds contributed by Messrs. Morden and Saunders, to the November number of your Journal. Having promised to continue my experience in Oological study during the past season, I beg to send the following notes:—The *Wood Thrush* and *Wilson's Thrush*, are quite abundant in this vicinity, but until the past summer I had but little personal knowledge of the Hermit Thrush. In June last, however, I discovered three nests of the latter species. The first, which contained four eggs, was placed in a low beech bush, nearly two feet from the ground, and was composed of dry leaves, stalks of dry weeds, bramble, rotten wood, rinds and small roots. Surrounding the nesting-place was a thick growth of low brushwood. The second nest containing four eggs, was placed in an old turned up root, about four feet from the ground, and in the midst of a grove of young tamarac. When discovered, the bird was sitting on the nest and I could have caught her had I wished to do so. The third nest, containing two eggs, was placed in a bunch of yellow water lilies, a few inches above the water of a pool. Early in April I saw a solitary specimen of the

Olive-backed Thrush, but I have not yet discovered its nest. On the 6th of June, I noticed a small species of Thrush, new to me, building her nest. The site chosen was a cavity in a low bank, overshadowed by a small hemlock, on the margin of a swamp, near water. A large quantity of dry leaves was used in raising the foundation to the required position. When I visited it a week after, the foundation of the nest was burrowed by some small animal, but I found one egg beneath it. This egg was marked exactly like that of the Golden-crowned Thrush; but it was much smaller in size. The other nest of this species, which contained five eggs, was placed in a corner of a turned up root, the top of which hung over, sheltering it from sun, rain, and observation, and beneath which was a pool of water. The female sat upon this nest until my hand was a few inches off. The colour of the bird was slaty-black on the upper parts, yellow below, with black marks extending downwards from the throat. Length five inches; common notes, a sharp "chip." Song of the male resembling the words "dure dure lidy, dure lee." I have since identified this species as the Large-Billed Water Thrush, (*Sciurus ludovicianus*). On the 8th of June, I discovered the nest of a species of warbler hitherto unknown to me. This was situated in a small balsam, (in a black ash swamp,) four feet from the ground, and formed of small stalks of weeds, rootlets and fine hair, much in form and size like the nest of the Chipping Sparrow. This nest contained four fresh eggs, white in colour, with a ring of reddish spots towards the largest end and a few dots of the same hue near the centre. I identify the latter species as the Myrtle Bird, or Yellow-Rump Warbler, (*Dendroica coronata*). The nest and eggs are in my collection. I also collected for the first time, two nests of the Chestnut-sided Warbler. One was situated in a cluster of raspberry vines; the other, in a small scrubby beech; the first contained two of its own eggs, and two Cowbird's; the other, four, and one Cowbird's. The eggs of the Cowbird were also found in the nests of the Black Snowbird, Swamp Sparrow, Song Sparrow, Chipping Sparrow, Yellow Warbler, Golden-crowned Thrush, Red-eyed Vireo and Water Wagtail. This latter nest was the first of this species that I have seen; it was placed in the cavity of a large turned up root, over a pool of water, into which the bird jumped when she left the

nest. The nest was like that of the Snowbird, and contained four of its own eggs, besides that of the Cowbird. These were white, thickly dotted towards the large end, with reddish spots. They were, however, (June 8th,) nearly incubated; so I did not remove them. On the 7th of June, I collected in a beaver meadow, some two miles north of the town, three nests of the Purple Finch; these were situated near the tops of small balsams. Four eggs are the general set. On the same date, I took from a small thorn bush, a nest of two eggs, which I have marked as belonging to the Black and Yellow Warbler. The Yellow Warbler is quite abundant in this neighbourhood now, though it is only a few years ago since I first noticed it, and the same may be said of the Bobolink. The Catbird is numerous in this locality, I have seen several nests this season, but never, except on one occasion, saw more than four eggs in a nest. The Red-wing Blackbird is also numerous; collected several nests this season, mostly from flags in water ponds, or the margins of creeks. The Highholder or Golden-winged Woodpecker, is the most abundant of this class of birds here; I have collected some five or six sets of its eggs this year. There are generally six eggs in each set. Altogether I have collected eggs of some forty different species of wild birds this season, and obtained seven additional species by exchange, from J. A. Morden, Esq. I have now in my collection specimens of the eggs of nearly seventy Canadian birds. When in London, on the 27th of September, last, I identified among the grand collection of Canadian and foreign birds, exhibited by J. A. Morden, Esq., a specimen of Cooper's Hawk, as the species whose nest and eggs I described in my last article.

Listowel, Ont., Nov. 1882.

WM. L. KELS.

COLEOPTERA FOUND IN THE PROVINCE OF QUEBEC.

By WILLIAM COOPER.

PHRYGANOPHILUS collaris, *Lec.*
 STENOTRACHELUS arcatus, *Say.*
 CRYMODES discicollis, *Lec.*
 PYTHO Americana, *Kirby.*
 PRIOGNATHUS monilicornis, *Baird.*
 BORUS unicolor, *Say.*
 SALPINGUS virescens, *Lec.*
 CALOPUS angustus, *Lec.*

This insect has a wide distribution, from New Mexico to the city of Quebec. Mr. Provancher says it is rare about the neighbourhood of the latter city. When I collected there, they were abundant at the upper end of St. John St., near the Finlay Asylum.

DITYLUS coerulesus, *Rand.*
 NARGERDES melanura, *Linn.*
 OXASIS 1 notoxides, *Fabr.*
 2 thoracica, "
 ASCLERA ruficollis, *Say.*
 CEPHALOON lepturides, *Newm.*
 ANASPIS 1 flavipennis, *Hald.*
 2 rufa, *Say.*
 MORDELLA 1 marginata, *Mels.*
 2 linearis, "
 MORDELLISTENA 1 scapularis, *Say.*
 2 pityoptera, *Lec.*
 PELECOTOMA flavipes, *Mels.*
 CORPHYRA 1 lugubris, *Say.*
 2 collaris, "
 3 fulvipes, *Newm.*
 NOTOXUS anchora, *Hentz.*
 ANTHICUS 1 reiectus, *Lec.*
 2 formicarius, *Laf.*
 3 floralis, *Payk.*
 4 corvinus, *Laf.*
 DENDROIDES Canadensis, *Latr.*
 PYROCHROA flabellata, *Fabr.*
 SCHIZOTUS cervicollis, *Newm.*
 MELOE angusticollis, *Say.*
 MACROBASIS unicolor, *Kirby.*
 EPICAUTA 1 Pennsylvanica, *DeGeer.*
 2 vittata, *Fabr.*
 POMPHOPAEA aenea, *Say.*
 MYODITES 1 fasciatus, *Say.*
 1 stylopides, *Newm.*
 BARYNOTUS undulatus, *Uhler.*
 SITONES 1 lepidus, *Gyll.*
 2 scissifrons, *Say.*
 PANDELETEIUS hilaris, *Herbst.*
 OTIORYNCHUS 1 sulcatus, *Herbst.*
 2 ligneus, *Oliv.*
 CYPHOMIMUS dorsalis, *Horn.*
 L'abbe Provancher described this species as MICRONYCHUS sulcatus which falls, it being preoccupied by OTIORYNCHUS sulcatus, *Fabr.* The insect is now known as C. dorsalis as above.
 PHYXELIS glomeratus, *Schoen.*
 LISTRONOTUS 1 appendiculatus, *Boh.*
 2 latiusculus, "
 ITHYCERUS Novaboracensis, *Forst.*
 PHYTONOTUS nigrirostris, *Fabr.*
 LIXUS musculus, *Say.*
 LEPYRUS colon, *Linn.*

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